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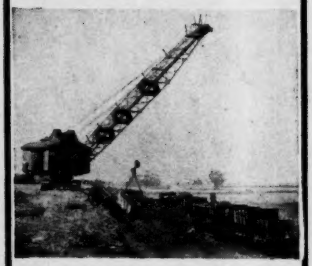

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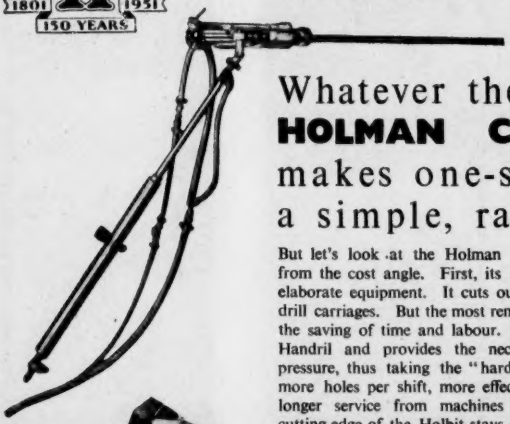

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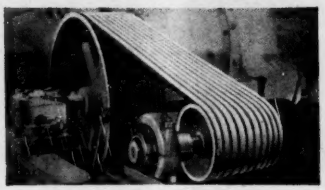

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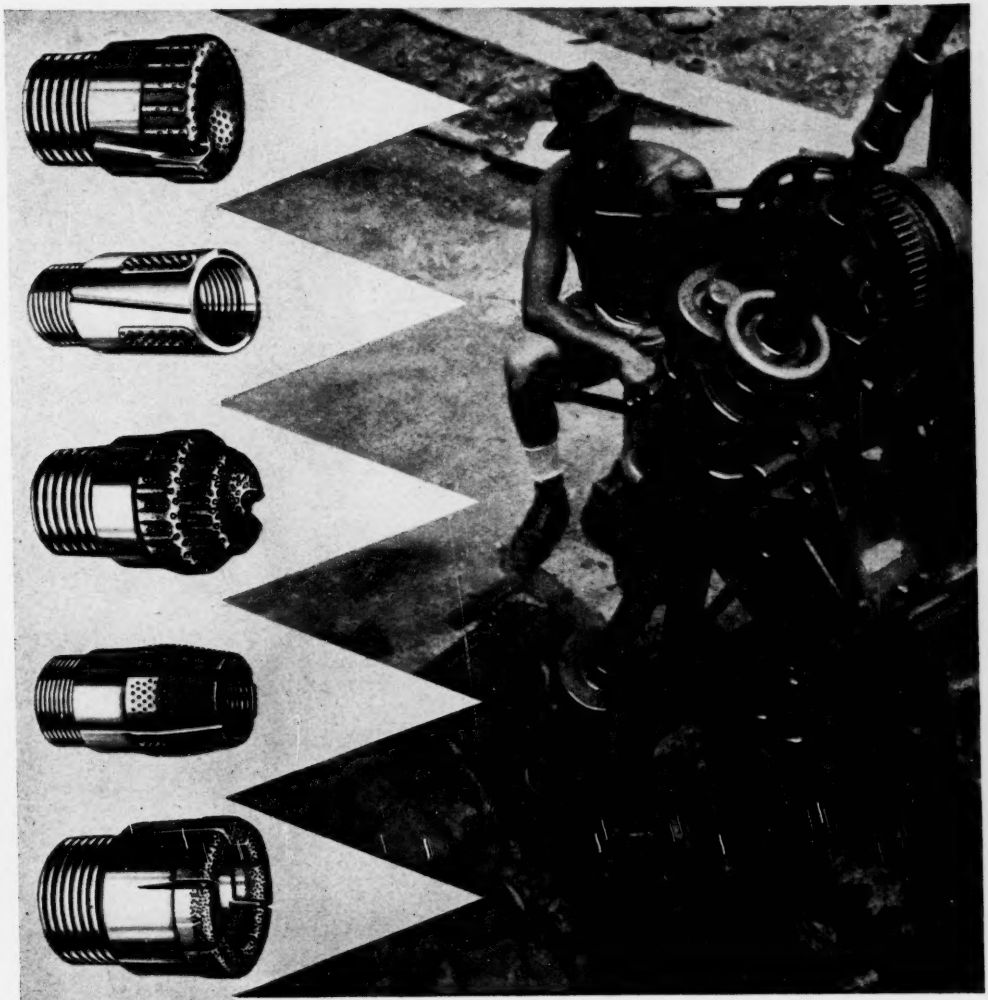

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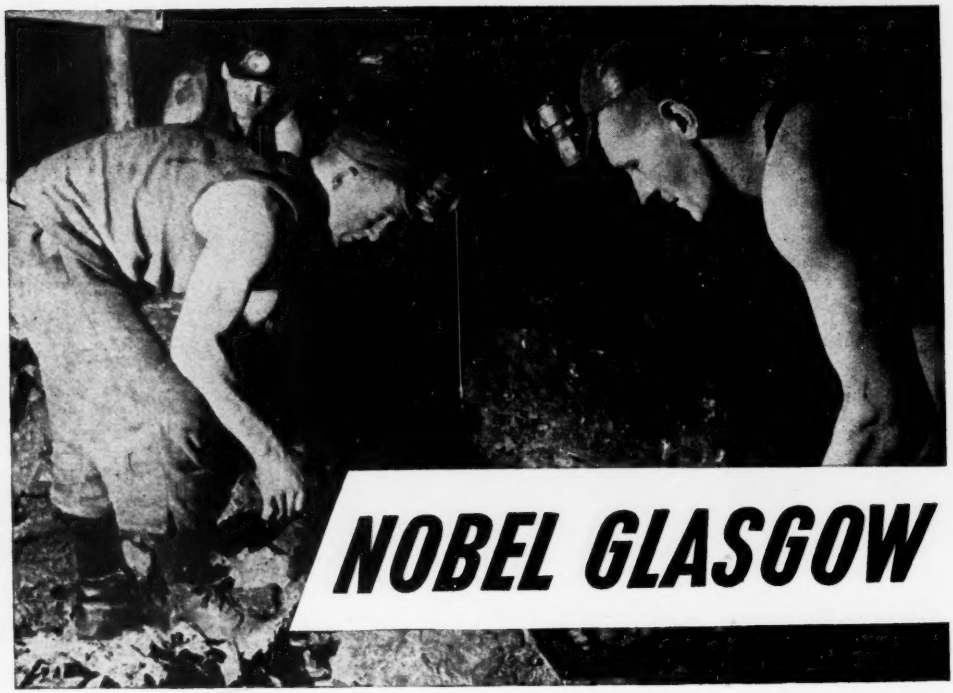

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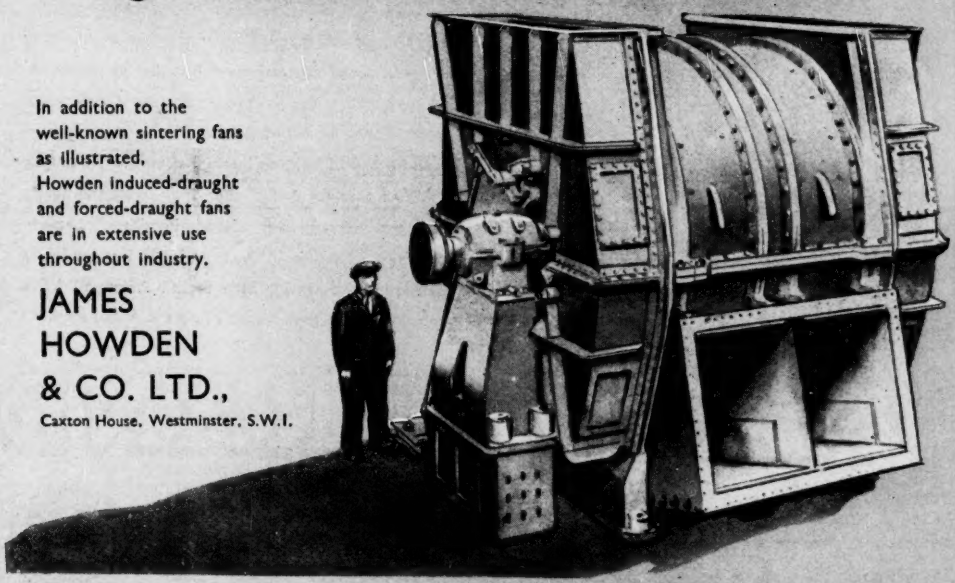

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THIS WEEK'S FEATURES

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NOTES AND COMMENTS

A Ministry of Materials

The establishment of the new Ministry of Materials—the functions and responsibilities of which are given elsewhere in this issue—is a reminder of the significant changes that have taken place since 1939, not only in the international flow of raw materials, but also in this country's position as their user. As during the last war, when the raw materials divisions of the Ministry of Supply and the Board of Trade controlled the supply of most raw materials, the foremost task of the new ministry will be "to ensure adequate supplies" of the many scarce materials which are such important sinews of industry and defence alike.

In deciding on the establishment of this new Ministry as a permanent feature of Government and, furthermore, putting it in charge of a Minister with Cabinet rank, having incidentally long industrial experience, the Prime Minister was no doubt mindful of the importance of having a single Minister to deal with the frequent international negotiations on raw materials, in which it is becoming increasingly difficult to consider the position of any one material except in terms of the overall position of them all.

Quite apart, however, from the day to day problems of procurement—which by themselves are in danger of engaging the Department's whole attention—a task of equal importance awaiting the new Minister so far as the mining industry is concerned will be the stimulation of the long-term effort required to increase total world supplies of scarce minerals, more especially from the Colonies, a task in which the United States has already shown much initiative through the agency of the E.C.A.

In this connection, we hope not only to see the Ministry tackle the problem of searching for new deposits which, for example, in Malaya is becoming a matter of critical importance, but also where necessary, assisting established producers to expand production from existing mines. Success in these vital tasks must depend largely on the attitude of the Treasury and, to a lesser extent, of the Colonial Office, and of the other supply Departments. Undoubtedly the greatest single brake on overseas mining to-day is financial, and it seems inevitable to us that sooner or later the new Ministry will be compelled to force a review of the whole question of the taxation of overseas mining companies. In this respect there is hope for the industry in the fact that the new Minister will have Cabinet rank, and will thus, let us hope, be able more cogently to argue the producers' case.

In allocating responsibilities as between the new Ministry and existing departments, marginal cases were bound to arise, but given the fact that the Ministry of Supply was to retain control of the iron and steel industry—a decision for which there is clearly an arguable, although not perhaps a decisive case—the consequent decisions regarding responsibility for the ferro-alloys seems reasonable enough. Thus, the responsibility for the procurement of the ores of the alloying metals—the form in which the bulk of the metals will reach this country—will rest with the Ministry of Materials, while control of the refined metals on which the steel industry is so dependent, remains with the Ministry of Supply.

It should also be noted that responsibility for production of secondary metal will remain with the Ministry of Supply. Administratively, this is perhaps unavoidable, as scrap recovery is intimately bound up with allocation to the user. Moreover, this arrangement can scarcely give rise to any difficulties so long as the supply position is such that our economy can absorb whatever new metal the Ministry of Materials can acquire. In the long-term view, however, we must look forward to a time when the supply position will be easier and this Ministry's purchases may become more selective. At that point, more exact statistical knowledge regarding the availability of secondary metal in this country—which it is hoped that the new scrap regulations will ensure—will become essential to the new Ministry.

The trinity of departments now established for regimenting the trade in metals and minerals at all stages will call for a very close liaison between all three bodies if friction is to be avoided and the success of this reorganisation of State control will be anxiously awaited.

A Dutch Review of the Tin Position

Under the title "Tin, a Semi-Precious Metal?" the Rotterdamsche Bank gives, in its *Quarterly Review*, (No. 1, 1951), a detailed picture of the outstanding features which have developed in the tin industry in the past two or three years. Understandably, as it is dealing with the course of events well-known in the industry, this review does not add appreciably to our knowledge except perhaps in regard to the industry in Indonesia, about which little current information has been available at any rate to English

readers. The extent to which dredges contribute to the production of concentrates in Banka and Billiton and Sinkep may not be generally known, but out of the total production of 28,965 tons in 1949, dredge operations accounted for 19,259 tons and gravel pumping and hydraulicing for 8,951 tons, with 813 tons derived from small miners and tributors. Indonesia, it is confirmed, is pledged by contract to make deliveries to the United States for its stockpile, but nothing is said as to tonnages or price. Last year the output of tin by the Billiton Smelter at Arnheim is given at 21,027 tons, most of which was exported, mainly to the United States, but also to Germany, France and Poland. The contract for sales of Congo tin to the U.S. stockpile is said to have been terminable if the price rose above $1.03 per lb., but that the United States informed Congo producers last autumn that it would not avail itself of the clause.

With the transfer to the Indonesian Government of the sovereignty over the Netherlands East Indies, the Indonesian State became owner of the Banka mines and majority shareholder in the Billiton undertakings. The report of the Billiton Co. last year suggested that the two interests would co-operate fruitfully.

The report concludes by raising the question of the price which the American authorities would consider "a reasonable level" at which to resume purchases in the open market, as according to the terms of the announcement no fresh purchases will be made for the stockpile, until such a level had been reached. Probably the United States authorities have not yet decided.

Conditions in Burma Still Unsettled

At a meeting of the Burma Chamber of Commerce in Rangoon recently, the Chairman, Mr. G. S. Nicoll, reviewed the mining industry in Burma during 1950 after a decade of war and rebellion, and pointed to signs indicating that Burma's mineral trading position was at last beginning to improve.

Owing to the continued prevention by insurgent activity of through traffic on the main line of the Burma Railways, which has now been severed for two years, operations have remained impossible at the Bawdwin mines. The recent re-opening of river transport between Rangoon and Mandalay has enabled some small tonnages to be moved from the mine for export.

Throughout the year the Mawchi mine has been completely isolated from the rest of Burma by insurgent occupation and production has been restricted to a negligible quantity, obtained from tributors, which is being held for further treatment. The mine and mill installations have been on a care and maintenance basis. The loss, both to the company and to the country, involved by the inability to take advantage of the current high prices is very considerable.

Conditions in the Tavoy district continued to be most unsettled throughout the year and it was not till early in November that the European staff were permitted to return to the mines in the eastern area. Before this, most of these mines were operated by subordinate staff under remote control from Tavoy and, while this was perhaps better than complete cessation of operations, in some instances the lack of skilled supervision resulted in major mechanical breakdowns in machinery or the ignoring of planned progressive mining programmes, so that tailings now cover ground carrying good values which may have to be abandoned. Apart from the menace of Communist insurgents, who are still at large in the district, the industry has had to cope with a most serious increase in ore thefts, which has been stimulated by the fantastically high tin and wolfram prices.

Brazil

(From Our Own Correspondent)

Teresopolis, June 8

The Statistical Service of the Ministry of Agriculture publishes the following figures, showing the volume and value of production during the first quarter of 1951: steel ingots, 187,967 tonnes; rolled steel products, 153,275 tonnes; pig-iron, 170,215 tonnes; coal, 439,370 tonnes; arsenic, 193,790 tonnes; cement, 319,112 tonnes; gold, slightly more than one ton (£1,160,000); silver, 154 kilos.

Rock crystals occur in many Brazilian States but, as in the case of several other mining activities, exploitation fluctuates violently, influenced by the international situation. The most important known deposits are at Cristalina, in Goias, where 12,000 persons were employed during the last war. Important deposits occur also in Minas Geraes and Bahia, where the biggest crystals are found. In 1938, Brazil exported 747 tonnes, mainly to Japan, Great Britain and Germany, in that order. In 1941, the United States came into the market and within the next two years exports rose to 2,411 tonnes, but dropped back to the pre-war figures of 300 tonnes in 1949. Early in 1950, demand from abroad was renewed, monthly shipments ranging from 14 to 55 tonnes.

Brazil, which ranks next to India as a producer of high-grade mica, exported 824 tonnes, valued at £427,840 in 1950. The principal purchasers were the United States (781 tonnes), Great Britain and Mexico (18.4 tonnes each). Commercial mica occurs in many States, but the best quality is found in Goias, while Minas Geraes has the largest number of deposits and is the biggest producer. Small quantities are also mined in the State of Rio. The average size of the plates is 6 x 6 x 3 in.

EXCELLENT GRAPHITE FOUND

Although a number of graphite deposits are known to exist, only two are at present being exploited, one at Fidelis, State of Rio, the other at Itapecirica, in Minas Geraes. In the latter, the seams, 10 to 12 metres thick, contain 30 per cent of excellent graphite, with reserves estimated at 600,000 tonnes. Mining is entirely mechanised. The exploiting company has erected modern plant at S. Paulo, the only one of its kind in South America, for refining and industrialising the mineral, and produces 100 tonnes monthly of refined graphite. All types are produced, 75 to 99 per cent pure, and the product has been classified as a national "similar." This means that imports from abroad are no longer licensed. The company has also installed plant to manufacture colloidal graphite and a variety of lubricants. Annual consumption of graphite in Brazil is 400 tonnes, the surplus being exported. Large stocks have accumulated owing to the restrictions against imports in Argentina and other countries.

Brazil's exports of beryllium, which began with 4 tonnes in 1936, reached 2,254 tonnes, at an average price of £105 13s. 7d. per ton, during the first nine months of 1950. The principal producing States are Minas Geraes, Paraiba, Rio Grande do Norte and Pernambuco, in that order. In Brazil, beryllium, with an average of 10-12 per cent BeO, is found chiefly in gneissoid rocks, associated with pegmatites. It is exploited in conjunction with tantalite, cassiterite and other minerals in the North-East, and with semi-precious stones in Minas Geraes. The question of installing factories in Brazil to extract beryllium oxide from the mineral is now under consideration. As it comes within the category of relatively rare metals, exports in the raw state could be prohibited by the National Security Council.

Canada

(From Our Own Correspondent)

Kirkland Lake, June 4

Rising prices for base metals are causing mine operators to explore every possible avenue to increase output. The price of nickel advanced another 6c. per lb. June 1, to a record high of 56.50c. Copper is expected to advance another 3c. per lb. to 29.25c. so as to come into line with the U.K. and Chilean price. Meanwhile, the price of zinc is holding steady, but is expected to rise in the near future because of the much higher price levels prevailing abroad.

International Nickel reported net sales of $65,216,000 during the first three months of 1951, realizing an operating profit of $28,892,000. After allowance for depreciation, etc., together with $10,945,000 in taxes, the company had a net of $14,731,000 for the quarter. These details suggest that International Nickel may have total sales, for the current year, of $260,000,000, pay taxes in excess of $44,000,000, and realize a net profit of $58,000,000. Because of the introduction of the 40-hour week, the company expects to have to increase working forces by approximately 1,000 men if output is to be maintained at the level established under the longer working week so far prevailing.

COBALT DEVELOPMENTS

Deloro Smelting and Refining Co. is spending $2,000,000 to double capacity for refining cobalt. When finished late this year, the plant is expected to compare favourably with the finest in the world. The company is the agent of the Canadian Government for the purchase of cobalt ores and concentrates. At the present time, cobalt treated at Deloro comes chiefly from Canadian mines, but with a substantial quantity imported from Morocco. The metal has come into extensive use in the construction of turbine blades for jet aircraft engines. The cobalt metal produced at Deloro is used largely in the manufacture of stellite alloys, which are so hard that they cannot be machined, but must be cast to a very fine degree of accuracy and then polished.

Sherritt Gordon Co. has arranged for a loan of $29,000,000 with which to place the company's Lynn Lake mine in production. The Federal Government will advance $5,000,000 to the Canadian National Railways as a first instalment of the estimated $15,000,000 required to build a new line from Sherridon to Lynn Lake in Manitoba. Meanwhile, Sherritt-Gordon has recently been spending about $500,000 a month on the Lynn Lake development. Plans call for construction of a plant somewhere in Alberta for the treatment of ore from Lynn Lake.

PLIGHT OF GOLD PRODUCERS

In a recent list of questions sent out by operators of gold producing mines in Canada, an effort was made to secure the opinion of stockholders, more particularly as to whether they would prefer the mines to operate at the present low margin of profit, or whether they considered it better to see the mines closed—to await more favourable economic conditions for producing the precious metal. While records are not yet complete, the answers already received suggest that if some of the leading mining companies were to follow the wishes of their stockholders, the mines would be closed down at once so as to await either a period of lower production costs or a substantial rise in the gold price. Meanwhile, rumours are coming from Ottawa which suggest at least a possibility of further assistance to the gold mines under the Emergency Gold Mining Assistance Act. Considerable significance is also attached to the fact that the International Monetary Fund has told 49 members that it wants any trade and exchange restriction removed or substantially reduced by March, 1952, to encourage as many nations as possible to set their money free. This is a move which is very much favoured by gold producers who believe that the metal would enjoy a substantial increase in price in the event of de-control of currencies.

The plight of gold mines in Canada is illustrated by figures submitted by Coniaurum Mines to the company's shareholders. Showing the price of gold ranging from $36.32 an oz. in 1939 to $37.92 an oz. in 1950, the list then proceeds to illustrate the following price increases for material and supplies:

	1939	1945	1950
	$	$	$
B.C. fir plank	36.50	43.00	126.00
B.C. fir sq. timber	37.00	53.00	135.00
Spruce, 2 x 4	35.00	53.00	73.00
Coal	8.05	12.67	16.18
Drill steel	.11	.14¾	.17½
Pipe, 1 in.	9.70	11.87	17.50
Rock drills, Leyners	460.00	—	1,100.00
Rock drills, stopers	425.00	470.00	712.00
Basic wages (bonuses additional) :			
Surface labourers	.52	.62	.91
Muckers' helpers	.58	.68	.97
Runners	.65	.75	1.04

It has become obvious that with the gold price fixed at the present level, and with the cost of labour, material and supplies rising, the margin of profit has dwindled to a mere skeleton of the former rate. This is the condition which has induced shareholders, both large and small, to express the view that many of the mines should close down and await more favourable conditions.

ST. LAWRENCE WATERWAY PROJECT

Construction of the St. Lawrence deep sea waterway is still in abeyance. No action has been taken at Washington, while at Ottawa, the Government is hesitant. Canadian politicians have been suggesting that Canada will proceed alone with the project. However, general opinion in this country is inclined to the view that the Canadian Government will await further developments at Washington before going ahead alone. However, determination is running high in Canada—and the outlook is that if the United States does not take some action before the end of this year, the Canadian Government will then proceed with this $800,000,000 project alone.

Asbestos production in Quebec Province has risen to over 92,000 tons per month. Gold production is averaging about 30,000 oz. per month, copper production 12,500,000 lb. per month, and the zinc output is slightly higher than that of copper.

Informal rationing of aluminum, copper and brass on a voluntary basis has ended in Canada, these metals having been placed under compulsory control from June 1. Nickel and steel had already been placed under compulsory control, and consumers are required to have purchase permits approved.

Pyrite Deposits in Western Australia—A Correction

In the despatch from our Australian correspondent in last week's issue, it was erroneously stated that Central Norseman Gold Corporation had developed large pyritic ore bodies on its leases and was supplying concentrate for the manufacture of sulphuric acid to Western Australian industries situated in the coastal districts. It was also indicated that the gold possibilities of these leases were receiving attention. These developments should have been attributed to the Norseman Gold Mines and not to the Central Norseman Gold Corporation.

A Reorganisation Plan for the N.C.B.

Suggestions how to improve the present organisation of the National Coal Board are made in a pamphlet entitled *Structure and Control of the Coal Industry* by Colonel C. G. Lancaster, M.P., in association with Sir Charles Reid and Sir Eric Young, both of whom have at different times resigned from the N.C.B.—just published by the Conservative Political Centre and approved by the fuel and power committee of the Conservative Party. It elaborates and, to a certain extent, modifies, the views put forward by Colonel Lancaster in a paper written nearly three years ago.

The authors point out that the coal-mining industry has been for too long in the arena of politics and that there was no reason why we should keep it there. Everyone recognized that public ownership in this industry had come to stay.

Dealing with the dual responsibility laid upon those engaged in the administration and management of the industry, the pamphlet states that the first is the responsibility for production and the second is for reconstruction. These cannot be separated: they are mutually dependent. "There is a wide measure of agreement, inside as well as outside the National Coal Board's organization, that the coal industry is not at present organized in such a way that it can produce that leadership. Cumbersome and slow-moving, it lacks that drive and decisiveness which inspire confidence and enable men and management to give of their best."

SIZE AND EFFICIENCY

The basic problem that, in the author's view, the Coal Board has not yet managed to solve has been well described as "the problem of bigness." There has been no shortage of theorists to point out and criticize the disadvantages of having too many small units of administrative, industrial or commercial management. But what too many of us seem to have forgotten is that size is by no means synonymous with efficiency. Until the Transport Commission came to join it, there was nothing quite like it in either size or importance in the world. It employs about four times as many people as the biggest private concern of this country, and three times as many as the biggest industrial enterprise in America. But that the national boards should attempt to control all, or most, or even many, of the details of the running of the industry is clearly incompatible with its size. The Coal Board has tried to do infinitely too much.

After admitting that in order to give shape and cohesion to an industry hitherto run by hundreds of independent managements, it may have been necessary, to begin with, to impose a rigid control from the centre, the authors go on to discuss defects of structure; they point out that several members of the Board are "functional" members —executive heads of Departments each dealing with one branch of the Board's work and having insufficient time to devote to questions of general policy, or tending to view them through departmental spectacles. Area general managers and mine managers find themselves only too often confused and frustrated by excessive interference from above. Small matters which any colliery company would have settled, now have a way of reaching London for decision.

The first thing the authors propose to do would be the regrouping of the collieries into manageable units. The size of these units would not be based on uniformity of tonnage produced or manpower employed: wide variations in the conditions in which coal is extracted would preclude this. Geological and geographic considerations should have primacy. The appropriate number of units to-day would be very much less than the forty-eight subordinate areas of the Coal Board. The right number would be about thirty districts.

These Districts would be sizeable concerns. On average each would have an output increasing from about 7,000,000 tons a year, and an annual turnover approaching £20,000,000. Some would employ more than 30,000 men. They would have under their control a variety of ancillary undertakings.

The administrative control of the whole of each District organization would be vested in a District Coal Board. This Board would consist of the District Chairman, whose position would be not unlike that of the managing director of one of the former large colliery companies, together with a small number of part-time members drawn from men with sound commercial experience, from within the Trade Union movement, and from people with local background and knowledge.

Within this framework the district production directors would have full executive control in matters of coal production and the physical development of the properties. They would have the assistance of a number of area production managers. Colliery managers should be in day-to-day control of their pits and encouraged to develop their own initiative. There must be an end to administration for administration's sake.

The District Coal Boards should receive statutory recognition in an amended Coal Industry Act. Each should have its own name, not a number, and its own balance sheet. Each should be given responsibility by the N.C.B. to produce a certain yearly output. Each should control all ancillary undertakings and activities within its area.

Each District should employ its own staff and workmen. Schemes for welfare, education and vocational training must continue to be pressed forward with Union help, and there must be adequate opportunity for the recognition and advancement of merit.

Decentralization will substitute for the remote, impersonal employer in London, a leader on the spot who can give his own prompt decisions on ordinary matters of management. If questions can be decided locally, then a greater reality will be imparted to the discussions of pit production committees, which have already done useful work. This way the miner will have a genuine say in his work.

On commercial policy, the authors emphasise that general marketing policy and price structure in the industry must remain national matters, and they envisage an organization for selling, separate in many respects from the production side of the industry.

A NEW COAL BOARD

The Coal Board itself would be so differently conceived, both in its work and its organization, that it would, in fact, be an entirely new body, confining itself to policy and financial control and there would no longer be a need for the present Divisional Boards.

The new Board must see the coal industry whole, against the background of a national fuel policy and the economy of the country. Day-to-day management which now clog its machine would be settled in the districts. Staff could be reduced substantially. The National Board should simply have the machinery required to perform its administrative functions: annual budgetary control and finance, which should now include: issue of stock; planning of development; co-ordination of sales; national wages negotiations; control of carbonization; and encouragement of research work in each district, the results of which, and of central research, it would make freely available to all.

Functions of the Ministry of Materials

The Bill establishing the Ministry of Materials, of which the Lord Privy Seal, the Rt. Hon. Richard Stokes, will be in charge, was introduced and read in the House of Commons a first time on June 15; at the same time, an explanatory White Paper (Cmd. 8278) was published of which the following is an extended summary:

It will be the duty of the Minister of Materials to ensure adequate supplies of the materials with which he is concerned. Where they are dealt with on public account, he will be responsible for their purchase and sale. He will take steps to increase the production of materials of which supplies are or may become inadequate, to promote their economical use, salvage and recovery, and to develop the production and use of substitutes.

The principle which has been followed in assigning materials to the Minister has been that, unless in a particular instance the public interest would be better served by some other arrangement, he should be responsible for raw materials up to the point at which they enter into manufacturing industry. But clearly no hard and fast rule can be laid down, and it has been necessary to consider each case individually and to decide what arrangement would be most advantageous in all the circumstances, including in particular the structure of the industry concerned. This explains why with different commodities the line has been drawn at different stages of processing, and why in some cases it has been decided that the Board of Trade and the Ministry of Supply shall retain their present responsibilities.

NON-FERROUS AND LIGHT METALS

The new Minister will take over the responsibilities of the Minister of Supply for the supply of non-ferrous and light metals in unwrought forms including ores and concentrates (referred to in the First Schedule given at the end of this article) except as mentioned below. As far as iron and steel are concerned, the Government has come to the conclusion that the only satisfactory arrangement is that one department shall be responsible for the industry as a whole, and that any attempt to distinguish between the basic raw materials and iron and steel at different stages of fabrication would be artificial and cause serious inconvenience. The Government, therefore, considers that the best course is for the Minister of Supply to remain responsible for the iron and steel industry as a whole. The Ministry of Supply will also retain the responsibilities for manganese ore (except dioxide) and ferro-manganese, which, like iron ore and scrap, are raw materials of the iron and steel industry, and for ferro-alloys generally, and other derivatives of tungsten and molybdenum. The Minister of Supply will also retain the responsibility for the non-ferrous and light metal fabricating industries.

SULPHUR AND OTHER BASIC MATERIALS

The Minister will take over the responsibilities of the Board of Trade for the basic raw materials of the chemical industry, but the Board of Trade will continue to deal with the chemical industry generally. Responsibility for sulphuric acid and fertilisers will, however, be transferred. In these cases the connection between the raw material and the product is so close that they should be handled along with the materials from which they are produced. Under these arrangements the Minister will be responsible for sulphur, sulphur-bearing materials and sulphuric acid; fertilisers; and a wide variety of basic materials for the chemical industry including salt, barytes and witherite, bromine, calcium carbide, glycerine, phosphate rock, potash salts, mercury, arsenic, iodine, boron minerals and bismuth.

The Minister will be responsible for hides and skins, leather and tanning materials, pulp (including dissolving pulp), other paper-making materials, paper and board, and paper and board products; natural and synthetic rubber and carbon black, cotton and wool; jute and jute goods and other textiles, and timber, including pitwood.

As regards other materials, the Minister will take over from the Board of Trade and Ministry of Supply the responsibility for a wide variety of other materials, including, inter alia: Rosin, turpentine, pine oil, pine tar, etc. Drying oils, minerals, e.g., graphite, mica, asbestos, ilmenite; precious metals, e.g., platinum, and abrasives and refractories. The Board of Trade will remain responsible for china clay, diamonds, and tobacco.

DISTRIBUTION

Responsibility for distribution schemes for materials which are scarce must depend on such factors as the extent of the shortage, the point in the chain of production at which control is exercised, and generally on any special circumstances associated with each individual material and its end uses. The general principle will, however, be that the broad allocations of materials among the various classes of users will be decided through the inter-Departmental arrangements which have existed for the purpose since 1939, and for which the Chancellor of the Exchequer is responsible as part of his function of co-ordinating economic policy, since the broad allocation of scarce materials is a decisive factor in determining the shape of the economy.

Where it is necessary to make detailed allocations to individual firms within these broad allocations, they will be determined by, or on the advice of, the Departments concerned with the particular uses. In respect of the materials for which the Ministry of Materials is responsible, it will be for the Ministry to initiate schemes for effective allocation and to see that they are honoured.

TWO SCHEDULES OF MATERIALS

The First Schedule of materials in respect of which functions are transferred to the Minister of Materials from the Minister of Supply includes:

1. The following metals (other than metals recovered from scrap) and, unless otherwise stated, the ores and concentrates of the metals and residues containing them: Aluminium, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Magnesium, Manganese (as metal or dioxide only), Nickel, Niobium (Colombium), Silicon (as metal only), Tantalum, Tin, Titanium (as metal only), and Zinc.
2. Ores and concentrates of, and residues containing: Molybdenum, Vanadium, Tungsten.
3. Abrasives in raw or manufactured form.
4. Refractories and refractory materials.
5. The following materials: Aluminium oxide, Sodium-aluminium fluoride, Cobalt oxide, Cryolite, Fluospar, Magnesium oxide, Magnesium carbonate, Nickel oxide, Quartz crystals, Vanadium oxide, Iron powder, Bentolite.

The Second Schedule, relating to materials transferred to the new Ministry from the Board of Trade comprises, *inter alia*, barytes, basic slag, graphite, mercury, mica, phosphate rock, platinum, pyrophillite, rutile and sulphur and sulphuric acid.

The Honigmann Process for Shaft-Sinking in Quicksand

Details regarding the Honigmann Process for Shaft-Sinking in Quicksand, given in a paper by M. Pinsard, entitled "Foncage d'un Puits en Sables Boulants, Procédé Honigmann" and published in the April, 1947, issue of the *Revue de l'Industrie Minerale*, have recently become available to the English speaking world as a result of a translation recently made available by the U.S. Geological Survey (Translation No. 19) of which the following is an extended summary:—

The lignite basin in the vicinity of Cologne is actively mined at present, although its westward extension near the Dutch frontier is now largely abandoned. The lignite crops out again in the Düren region, where it is worked by the open-cut method; but the coal-bearing strata have had a downthrow so that the lignite beds in the central part of the basin are several hundred metres below the surface. The reserves of the field which is being mined by the open-cut method, are estimated at 1.5 to 2 billion tons. The deep reserves in the central part of the basin would be about 30 billion tons. Therefore, operations in this central zone are now under consideration. Two methods of working are possible: either normal open-cut operation, which would involve the removal of a considerable amount of waste material, or underground mining in several sections, which would also have numerous difficulties.

To test this last method, it was decided to sink two shafts in a zone previously explored by numerous borings (Concession Union 103). The overburden is composed mainly of sands and gravels, with intercalation of a few layers of clay. In the area where the shafts were sunk, the sand and gravel are about 300 m. thick and contain two noteworthy beds of clay. One, about 15 m. thick, lies at an approximate depth of 200 m. The other clay seam is 4 to 5 m. thick and is nearly 280 m. below the surface. At that place, the lignite deposit is about 40 m. thick and has a clay roof a few decimeters thick and a good footwall of clay.

Considering the nature of the ground, the following methods for shaft-sinking were chosen: (i) Honigmann process for shaft 1 and, (ii) the artificial freezing process for shaft 2. As this was a test mine, both processes were applied simultaneously in order to make comparison. Special care was taken, however, to locate the shafts 300 m. apart to avoid possible interfering repercussions.

PRINCIPLE OF HONIGMANN PROCESS

Experience in boring has shown that the walls of a bore hole in soft water-bearing formations could hold up without support if:

(a) the liquid filling the bore hole is a mixture of water and clay;

(b) this liquid is maintained at a constant level higher than that of the nearby water table.

The clay in suspension behaves as it would in a filtering basin with a sandy bottom where water filtering by gravity through the sand leaves behind a film of clay.

Gravity is replaced here by the high pressure which prevails inside the bore hole as a result of the difference in level between the waterheads. The water of the bore hole thus tends to filter to the nearby water table and deposits on the wall of the bore hole a coating of clay which holds the sand in place.

The Honigmann process applies this principle in a series of borings each of which increases the size of the shaft until the final diameter (larger than the diameter wanted for the shaft) is reached. Each boring is driven to the final depth of the shaft.

When the final diameter is attained, a tubing made of metal rings is lowered in the shaft. The first ring, hermetically closed by a cement plug, is placed over the shaft and lowered slowly until it floats on the clay-water mixture which fills the hole. The ring is then lowered into the shaft by filling it with water. When the upper part of the ring is flush with the surface of the ground, the next ring is joined to it, and so on. After the complete tube is set in place, the space between the tubing and the wall of the bore hole is filled with cement.

This process is relatively simple and the shaft-sinking can be completed rapidly. The first boring, of small diameter (70 cm.), gives a very exact section of the formations, which helps in determining the type of support needed.

Finally, the sections of the tubing being joined above ground, the joints were made perfectly watertight by caulking the outside of the tubing.

APPLICATION

Sinking Shaft 1 of Concession Union 103 was undertaken in November 1942 by the Rheinische Braunkohlen Tiefbau, G.m.b.H. The work was interrupted by the bombardments and was resumed in November, 1946.

1. *Shaft Sinking.*—The following diameters were chosen for the successive borings: (1) 0.70 m.; (2) 2.00 m.; (3) 3.50 m.; (4) 5.00 m.; (5) 6.15 m. These borings were drilled with a rotary table. According to the nature of the formations, the boring head includes four or six arms provided with removable cutters. It is topped by a sort of metal cage which acts as a guide. Inside the tubing, a compressed-air pipe extends down to about 20 m., where it ends in a nozzle which ejects compressed air under a pressure of 2.5 to 3 k.g. The suction created inside the casing is sufficient to carry back the "cuttings" (ferruginous boulders weighing up to 30 k.g. have at times been brought up). A diagram of this installation is given in the accompanying illustration.

The cuttings are deposited in a settling basin. After contents of the clayey waters (adopted density: 1.10 to 1.15) has been checked, this drilling liquid returns in closed circuit to the bore hole where it is maintained at a level about 20 m. (max. 23 m., min. 18 m.) higher than the level of the water table.

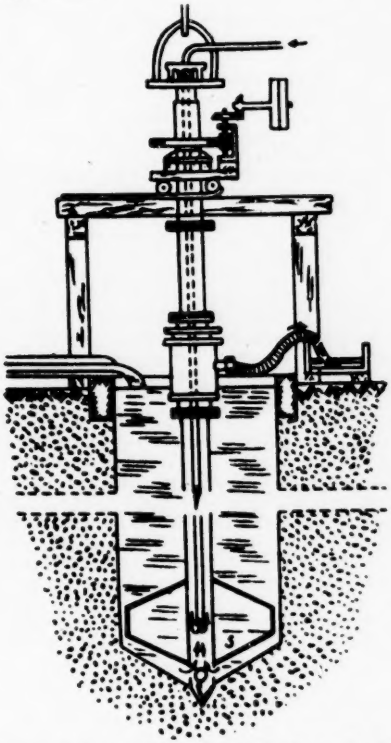
The method used to enlarge the bore holes (that is, borings 2, 3, 4, and 5) is twofold. The material cut off by the enlarging head, which is similar to the rotary head, just described, falls inside the preceding bore hole. A lower head, acting mostly as an agitator, helps force the removal of this material back up through the tubing. In addition, the rig includes a lower guide drum adapted to the diameter of the preceding bore hole.

SAFETY RINGS

Contrary to what happens to sands in this process, clays have a tendency to collapse. Therefore, at the time of the last widening, the clay layers are held in place by a safety ring set immediately after the layers have been drilled through. The construction and method of emplacement of these safety rings are the same as for the final support. It will be noted, however, that they must have a larger diameter than the final tubing, which will pass through them. This explains why the diameter of the last boring has to be appreciably larger than the diameter desired for the shaft.

After boring the first hole, which permitted the determination of the exact nature of the formations and consequently the final diameter, the guide-bore pit was definitely established at a level lower than that of the water table.

2. *Support.*—Each element of the tubing is made of a double ring of U-iron. The sections of the rings are sealed by welding; then the rings are riveted together through the sheet-metal collars which are placed between the ring sections.



A diagram of the installation used in the Honigmann Process for shaft-sinking

The rings set in the overburden are made of steel having a resistance of 37 kg/mm², whereas those passing through the coal-bearing beds are of steel having a resistance of 52 kg/mm². The thickness of the sheet-metal collars increases with depth: from 21 m. to 250 m., 10 mm.; from 250 m. to 280 m., 15 mm.; and from 280 m. to 328 m., 20 mm. These sheet-metal collars are perforated to allow the injection of cement inside the double wall.

Before being put in place, the rings are joined in series of seven, so that each segment is about 2.20 m. and weighs about 16 tonnes.

The first segment, which will form the bottom of the shaft, is closed by a cement plug. It is brought to the shaft and laid on chocks. Held by pulley blocks, it is slightly raised to release the chocks, then lowered as previously described. Each segment is joined to the preceding one at the mouth of the shaft, where the joints are caulked on the outside to insure watertightness.

The tubing is lowered until the bottom ring is about 1 m. from the bottom of the shaft. A cement solution, which has a density of 1.75, is injected through pipes, which are inserted between the tubing and the wall of the shaft.

The tubing is then lowered the remaining distance. Under the weight of the mass, the cement is strongly compressed and pressed back on the outside wall so that the latter is perfectly watertight.

The rings are prepared locally as they are too cumbersome to be brought to the mine by railway. The mine receives the sections of U-iron which go through the following process:

(a) Each U-shaped section is bent into a ring when cold (in order not to reduce the resistance of the metal);
(b) The ring is closed by electric welding;
(c) Rivet holes are drilled in each ring;
(d) Seven rings are joined into a single piece by hydraulic rivetting machine;
(e) The joints are caulked on the outside, and
(f) The seven-ring segments are then taken to the yard. Swing-cranes take the parts from one shop to the next.

NUMBER OF MEN EMPLOYED—OUTPUT

Under normal conditions, 72 men are necessary for this work, viz.: shaft-sinking, 25; preparation of the rings, 30; workshop, 9; and miscellaneous, 8.

The duration of the different shaft-sinking operations (328 m.) is 12 months, as follows (in months): Boring to 0.70 m. diam., 3; guide-bore pit (20 m.), 1; widening: to 2 m., 2; to 3.50 m., 2; to 5 m., 2, and to 6.15 m., 2 (estimation).

Putting the tubing in place is expected to require 4 months. Including the preparation of the surface installations, it was estimated that completion of the whole operation would require 21 months.

The time required for preparation of the rings and joining them in series of seven was estimated as 19 months for 140 seven-ring segments. After acquiring some experience, however, the shift in charge of this work was able to assemble three segments a week.

From records dating to 1932, the cost price of 1 m. of shaft sunk by this process was evaluated as follows (in R.M.): To 100 m., 2,000 to 3,500; to 200 m., 3,500 to 5,000; to 350 m., 5,000 to 7,000; and to 500, 7,000 to 10,000.

Up to a diameter of 4.50 m., this process is considered to be more advantageous than the artificial-freezing process. Between 4.50 m. and 5 m., the two methods are equivalent. Beyond 5 m., the artificial freezing would be more advisable.

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Ilmenite and Kaolin Prospecting in Ceylon

Ores occurring in Ceylon will be the subject of a survey by a UNESCO team, which will also cover coastal deposits of ilmenite and kaolin. The team will consist of an ilmenite consultant, kaolin consultant and a mining engineer, whose primary investigations will concern ilmenite and kaolin deposits on the Ceylon littoral. It is coming to the Dominion under an agreement signed recently between the Ceylon Government and UNESCO which latter body is mainly interested in the academic side of the survey. This survey is expected to provide material for research purposes and to make it possible to assess the economic potential of the minerals from an industrial point of view. Meanwhile, arrangements have been made to establish a Government ilmenite factory at Pulmodai, 20 miles north of Trincomalee.

REVIEWS

The Witwatersrand Gold Mines.—*By Paul Klempner. Published by the author. Distributed by "The Investor's Chronicle." Pp.* 307; 5½ *x* 8½ *in. Price* 25*s.*

The book is of two parts. The first gives information about the Rand and about certain factors affecting mine and share valuation. The second summarises from published sources the current operating data for each of the Rand mines, together with a brief note on the current position and future prospects of each.

Included in the first part of the book is a brief history of the Witwatersrand goldfield, followed by short notes on premium sales of gold and on estimated revenue from the four mines which are to produce uranium for the Atomic Energy Board. Mr. Klemper then goes on to discuss methods of calculating the gold content of mined ore and the cognate question of payability. This, and the following section on taxation will already be familiar to those who have read his book on the O.F.S. mines (reviewed in *The Mining Journal* of November 3 last). A final section discusses a method of share valuation and of calculating the life of a mine. There is also a detachable map of the Witwatersrand at the back of the book, which at least has the virtue of clarity.

Like the author's earlier books on the O.F.S. and the Vaal River area, this book is written for the technically uninformed mining investor, who will undoubtedly find some helpful information, although little which is not already available to him from other published sources.

Reading through the first part of this book, one cannot help wondering what has been the basis on which Mr. Klempner has selected his material. Certainly premium gold sales and, to a much lesser extent uranium, which are both given some prominence, are factors in share valuation, but are surely less significant than the cost situation, the individual elements in which are scarcely touched on. Nor is the question of availability considered. Quite apart from the question of cost, availability of labour and electric power, to quote two examples, are vital factors in estimating probable future selling rates.

Incidentally, Mr. Klempner makes one point, which will undoubtedly raise some controversy. Pointing out that mining costs have been rising over the past ten years at an average of about 1s. per ton per annum, he concludes that in most cases the effective factor in determining the life of a mine is the extent of the current profit margin. Thus, he argues that a mine with a current profit per ton of 10s. has in effect a life of little more than ten years even though estimated ore reserves promise to last much longer, and indeed he seems to base his life estimates for all the Rand mines on this argument. In fact, if costs are going to continue to rise for the next ten years at the rate they have been rising over the past decade it is inconceivable to us that the price of gold will remain unchanged by the end of that time. Some mines, moreover, might well defeat his calculations by raising their average milling grade.

As regards the second portion of the book, current mining and development results and ore reserve estimates are given for each of the producing companies, with space for subsequent quarters to be filled in from statistical supplements which will be supplied to readers from time to time. These figures taken from the companies' published reports cover 1950 and the first three months of 1951, but suffer from lack of comparative data for earlier years, which are readily available and essential to a clear picture of the position.

All in all, while the investor will find Mr. Klempner's book readable and informative, he should be warned that it will not by itself provide him with the equipment necessary for an evaluation of the prospects for the Rand mines.

Mining Year Book—1951.—*Walter E. Skinner,* 20, *Copthall Avenue, London, E.C.2, and The Financial Times,* 72, *Coleman Street, London, E.C.2. Price* 30*s. net;* 31*s. post free* (*inland*), *and* 31*s.* 6*d. post free* (*abroad*).

In view of the many changes that have taken place during the past year, the 65th annual issue of this standard reference work, compiled by Walter E. Skinner, should prove invaluable to all interested in the mining industry. It contains complete and up-to-date particulars concerning 950 companies operating in all parts of the world together with a list of names and addresses of 1,000 mining engineers and mine managers and the companies in the book with which they are connected.

Particulars of each company comprise names of directors and other officials, description of property and plant, operating results, capital, dividends and financial results.

Other features of this indispensable annual are maps and plans of various properties, statistical tables showing gold production of the principal mining fields, supplementary index containing names of companies which have appeared in previous volumes and a Buyers' Guide to manufacturers of mining equipment, containing 589 headings.

An Introduction to Aluminium and its Alloys

We have just received a copy of a new Information Bulletin (No. 1), just published by the Aluminium Development Association. In this Bulletin, the history of aluminium, and the development of aluminium alloys is treated in such a way as to introduce readers to these materials and later sections introduce readers to the more technical Information Bulletins published in this same series.

The historical opening is followed by a reference to the distribution of aluminium in the earth's crust and by a description of geographical location of aluminium industries; then, the reader is taken through the stages in the production of aluminium and its alloys. The next section on the forms in which aluminium is available is necessarily compressed, but is made the more interesting by being linked with illustrated descriptions of the various production processes, such as rolling and extrusion. A brief account is given of the manner in which the present British Standards for aluminium and its alloys have come into being, and the nomenclature is indicated sufficiently for introductory purposes.

Succeeding sections deal in turn with properties, workshop practice, joining methods and surface finishes, frequent references being made to the Association's Information Bulletins Nos. 2 to 17 inclusive. The last section is a rapid survey of the applications of aluminium and its alloys in transport, engineering and mining. Statistics for the world production of bauxite and virgin aluminium are given in an appendix. A selected bibliography concludes this informative and well-produced Bulletin, copies of which may be obtained from the Association's address: 33, Grosvenor Street, London, W.1. (Price, 1s.).

Geology of the District North and East of Leeds.—*By Wilfrid Edwards, G. H. Mitchell and T. H. Whitehead. Pp. vi* + 93; *figs.* 15, *plates* 3. 1950, *H.M.S.O. Price* 7*s.* 6*d. net.*

This additional volume, published in the Memoirs of the Geological Survey of Great Britain, contains chapters on Coal Measures and on Mineral Products, Water Supply and Agriculture. The Appendix gives details of records of Shafts and Boreholes.

Technical Briefs

New Steel Process

Canada is reported to be planning to increase steel output by 10 to 15 per cent by a new process which is now being tested in two steel mills. Mr. J. Convey, in charge of experiments, said that the process removed sulphur by putting a manganese alloy into the ladle carrying molten steel from the furnace instead of putting it directly into the furnace.

Dextran in Oil Well Drilling Muds

Laboratory experiments described by W. L. Owen (*Sugar*, 45, No. 11, 35, 1950) using solutions of pure dextran, Viscoba (a modified dextran) and *Gum Ghatti* indicate that Viscoba is an excellent agent for retarding water loss when drilling in saline strata. Its viscosity is lower than that of any of the natural gums, including *Ghatti* for concentrations normally used in oil well drilling and this is, of course, a further advantage. Quite apart from its technical advantages, the scarcity and high price of natural gums would appear to favour the use of dextran and Viscoba in this field.

Norwegian Furnaces for Union Carbide

The well-known U.S. carbide concern, National Carbide Co., has ordered two carbide furnaces from the Norwegian electrical construction company. Elektrokemisk A.S. of Oslo. These new, closed type furnaces will be among the largest in the world, with an annual capacity of about 60,000 tons each. They will be fitted with electrodes with a diameter of over 4 ft. The electrodes are of the well-known Soderberg type, named after their Norwegian inventor. The Soderberg method of electrolytic smelting is widely used in North America, and in Canada, one large aluminium factory uses over 3,000 smelting ovens fitted with Soderberg electrodes.

Stray Currents in Coal Mines

The existence of potential differences (p.d.) of up to 14 volts have been demonstrated in Pennsylvanian anthracite mines by C. F. Weber (U.S. Bur. Min., 1950, Rept. Invest. 4637, 8pp.). These were observed between track rails, conveyor lines, chutes and air pipes and may have been the cause of the premature firing of charges. The most frequent source of the p.d. is, apparently, the potential drop in the return conductors from locomotives when they are taking a heavy current. In order to avoid the existence of these dangerous p.d.'s, it is recommended that all possible conductors should be bonded at 50 ft. intervals in order to ensure that there is nowhere a p.d. of more than 0.7v.

German Work on Silicosis Prevention

German miners in Bochum, Ruhr, are trying out a new preventive treatment which is claimed to be very successful against silicosis. They have been treated over the past six months in an "inhalation clinic" at the nearby Hanover Hannibal coal mine, formerly owned by Krupp. In this clinic, they inhale particles containing calcium, which are said to form a protective layer over harmful dust in miners' lungs. So many treated have reported improvement in their health that all the coal mines associated with Krupp have decided to install similar centres. The apparatus costs only DM.12,000 and is installed in the wash room. The idea is that when the miner comes to the surface after the day's shift, he spends a few minutes in this calcium-impregnated atmosphere while washing off traces of coal. Doctors claim that this treatment is not only beneficial for silicosis, but also for bronchitis, another frequent complaint in miners because of the sudden changes in temperature which they undergo when arriving at the surface after working in the heat of the pit.

Unconventional Methods of Chromium Production

A number of unconvenional methods for the production of chromium, which are not at present operated on a commercial scale, have been intensively studied by Kroll and co-workers (U.S. Bur. of Mines, *Rept. Invest.* No. 4725, 1950). These include the reduction of the oxide *in vacuo* with carbon, the electrolysis of the fused chloride, the dissociation of the iodide and nitride, the reduction of the chloride with hydrogen, magnesium or zinc, and the reduction of the oxide with calcium.

The authors consider that the reduction of the chloride with hydrogen is promising, provided that it is accompanied by reclamation of the hydrochloric acid. The reduction of the chloride with magnesium, followed by vacuum separation of the salt, has been developed up to pilot plant scale. Oxide contaminated chromium can be purified with dry hydrogen at a high temperature and yields a very soft and hot-malleable chromium which, however, becomes brittle when cold.

New Use for Vermiculite

An interesting new use for vermiculite as insulating material is reported from Canada, where a hot, alloy steel ingot, weighing 30,000 lb., was shipped 200 miles recently by rail from the Dominion Iron & Steel Co. at Sydney to the Trenton Steel Works, Trenton, Nova Scotia, a subsidiary of the Dominion Steel & Coal Corp. The ingot, after being allowed to solidify in a mould, was stripped and placed in a cast-iron box insulated with premoulded vermiculite, unoccupied space being filled with loose vermiculite. A steel lid covered the box, which was secured to the floor of the railway car and firmly braced. The temperature of the ingot on leaving Sydney was 1,700°F.; on arrival in Trenton the following morning, it was 1,575°F. An ingot was previously allowed to cool for roughly six weeks before shipment and was reheated at Trenton, a process requiring 8 to 10 days. An article on "Vermiculite in the Commonwealth" appeared in *The Mining Journal* for January 12, 1951, pp. 30-31; our issue for February 5, 1949, contained on page 100, an article entitled: "Vermiculite—an Important Building Material," and the "First Rhodesian Output of Vermiculite" was referred to on page 58 of the January 22, 1949 issue.

"Fluid Bed" Technique for Utilizing Low-grade Fuels

Work which is now being done at the Fuel Research Station, Greenwich, may result in a new way of utilizing low-grade fuels, which are now wasted. An experimental plant for the conversion of coal-washery slurry into water-gas is already working. This gas forms an important proportion of the gas used for domestic purposes and it is also a potential source of valuable chemical products. Among these are fuel oils and other hydrocarbons.

At present, water-gas is produced from high-grade coke at a cost of 7d. a therm. It is estimated that the new process, if successful, could reduce this cost by as much as 50 per cent and release a 1,250,000 tons of coke annually for industrial and domestic use.

The process takes place in a cylindrical metal retort in which the fine coal is heated to incandescence. Steam passed through the cylinder reacts with the coal to form water-gas.

The difficulty of using finely divided fuels has been caused in the past by their tendency to pack so tightly by their own weight as to become virtually solid. This has been overcome by using the "fluid bed" technique, in which the steam is blown in from below at a pressure which keeps the fine dust in suspension; thus, the steam reacts with each particle.

Metals, Minerals and Alloys

The International Materials Conference which has been at work for some time past in Washington in an announcement at the end of last week, stated that a tentative agreement had been reached by the Copper-Zinc-Lead Committee to recommend a general allocation scheme to start in October next. The Committee said that the stated requirements for primary copper and zinc for 1951 far exceeded the estimated production. The Conference also recommended the setting up of an international allocations scheme for tungsten and molybdenum, but in this case they recommend that an interim distribution should start on July 1, with price limits at which all the concentrates should be sold during the third quarter of the year. The recommendations of this Tungsten-Molybdenum Committee have already been forwarded to member governments. The temporary allocation would enable the committee to continue its work on a long-term distribution scheme, under which production could be maintained, together with regulated sales. The debate on the new Bill now before the British Parliament, defining the spheres of the Board of Trade, the Ministry of Supply and the Ministry of Materials, which is discussed more at length elsewhere in this issue may possibly reflect the progress which has been made in Washington.

Copper.—The N.P.A. is pressing for consumers to file their copper requirements for third quarter production, so as to avoid possible disruption of production schedules. According to the National Industrial Conference Board, rearmament will entail much larger consumption of all metals, and it is thought that general rationing, both for civilian and defence needs may have to be imposed from the beginning of the fourth quarter of the year. Despite the constant complaints in the U.S. that the domestic price is too low, a contrary opinion was voiced last week by Mr. J. T. Duffy president of the Riverside Metal Company, N.J., who said that there should be no increase in the price of copper, but a release of some of the stockpile and subsidizing of marginal high cost producers.

The Copper Institute figures gives the domestic output of crude copper in May as 96,825 tons, compared with 90,794 tons in April; the Bureau of Mines states that the mine output in April rose to 2,749 s.tons daily or a rate in excess of 1,000,000 s.tons annually for the first time since June, 1944. Refined production in May is computed as 113,513 s.tons (103,494 in April), while stocks at the end of the month were 60,896 s.tons, the highest for over a year. This increase was explained by a change to include "in transit" shipments of Chilean copper in the refined stocks held in the U.S.A., and their deduction from world stocks. The Copper Institute accordingly showed stocks of refined copper abroad at 150,549 s.tons compared with 164,588 s.tons in April. They give the production of primary crude abroad at 115,267 s.tons, secondary production at 258 s.tons, refined production as 97,004 s.tons and deliveries 92,505 s.tons.

Plans designed to straighten out the supply position in copper in Washington are, of course, liable to dislocation should the various unions resort to strikes or go-slow tactics. Thus the men at the Laurel Hill Refinery, with an annual capacity of 140,000 s.tons of electro went on strike suddenly early last week, and though they returned to work shortly afterwards, the strike was clearly intended to serve notice on the Company with a view to a new agreement to be negotiated when the present one runs out at the end of the month. A general strike also began at the Chiquicamata and Potrerillos mines of the Anaconda Copper Mining Company in Chile and has extended to Braden. The strike has been ascribed to a struggle between the Communist party and the Chilean Popular Socialist party for control of the copper workers' federation; but the long hand of the Soviet is suspected. The government are said to have ordered the strikers to return to work.

The Australian price for electro has been raised by £A.30 to £A.260 per ton, with a ceiling for scrap £A.250.

Lead.—Difficulties in the lead trade in the United States seem to be multiplying. Smelters of the metal say that the order to set aside production to meet Defence Orders is entirely unworkable. Defence Orders alone for July delivery promise to exceed the month's entire production. Smelters have declined to sell foreign pig lead to consumers at the basic domestic price of 17c. plus import duty, and such sales will henceforth be priced at the Mexican f.a.s. Gulf level of 21½-22½c., duty for buyers' account. The U.S. Government is expected shortly to roll back scrap prices to the basis of 16c. per lb. for primary metal. The larger smelters will not bid over 16½c. for clean scrap. Production of secondary lead scrap is expected to amount to 400,000 s.tons this year. The Raw Materials Committee has not yet considered the lead position.

U.K. stocks again fell during April to a total of 24,669 tons compared with 32,470 tons a month earlier. April consumption including remelted scrap was 29,046 tons. The total for the first four months of the year was 120,446 tons.

Tin.—The R.F.C. is continuing to cut their selling price of Grade A tin, which was reduced to 118c. yesterday week, to 111c. the next day, and to 106c. (equivalent to £848 per ton), last Monday, with corresponding falls in Singapore and London. There has been a sharp recovery in the open market since, based possibly on an intimation from Mr. Symington, Administrator of the R.F.C., that we were approaching a point where the U.S. would once again buy on foreign markets. Mr. Symington also revealed that an offer had been made to Bolivian producers which could give them a better return than they were getting before the Korean trouble began—when the quotation was 76.87c. The reaction of the Bolivian Government to the offer is unknown, though they had protested against the fall. Señor Martinez Vargas, the Bolivian Ambassador in Washington, has protested strongly against statements repeated recently, that Bolivia was a party to any international cartel to increase unduly the price of metal, and added that such statements entirely contradicted the policy of co-operation among the nations of the Americas. The Indonesian Government has also protested.

The Malayan Information Agency gives the imports of tin concentrates into the Straits in May at 743 tons, 688 tons from Thailand and 55 tons from Burma.

U.K. consumption in April was 2,104 tons and exports 366 tons. Stocks at the end of the month were 1,913 tons. The output of metal in Belgium is expected to be unchanged from last year's figure of 10,000 tonnes and that of Holland 20,000 tonnes.

The managing director of Géomines, M. Barzin, is reported as saying recently that the Company had discovered some two or three years ago a large deposit of cassiterite under the area now being worked. While not rich, the deposit was large and could be worked to a profit. It is located between Manono and Kitotolo in Central Katanga. It was to develop this new area that the U.S. had made grants to the Géomines company, to be repaid in concentrates and metals. Outcrops of similar rocks are said to have been found in several points in a large area of Katanga where other Congo tin companies have also made discoveries.

Profit of the Billiton company last year was fl. 5,011,331 against fl. 3,030,172 in 1949. Profitable operation of some workings is said to be threatened by monetary and exchange measures of the Indonesian Government.

Tinplate manufacture has been cut by 35-50 per cent in the Australian States, and this will probably affect all exports of tinned goods.

Zinc.—Zinc remains as scarce as ever with no relief in prospect for the next few months. The Copper-Zinc-Lead Committee estimates requirements for 1951 to be greatly in excess of production estimates.

The British Bureau of Non-Ferrous Metal Statistics gives U.K. stocks at the end of April as 31,582 tons compared with 34,985 tons at the beginning of the month. Consumption for the month was 23,155 tons and for the four months of this year 96,749 tons against 108,252 tons a year ago. Stocks of concentrates in the country were 29,703 tons of contained metal as against 35,132 tons at the beginning of the month.

Asbestos.—*Asbestos* of Philadelphia reports continued shortages in the supply of certain grades of fibre despite general record production. Demand for textiles, particularly cloth and tapes exceeds supply, and heavy Defence orders for spinning fibre contribute to a difficult situation for civilian users. Production of all friction materials is at record high levels, despite the cutback in automobile production. Demand and output of asbestos paper is in equilibrium. In millboard there is little in the way of backlogs and producers should be easily able to meet the demands of buyers in the next few months. Most manufacturers of high-pressure insulation material still have substantial backlogs but in low-pressure material various factors are contributing to the current weakness of demand. In asbestos cement products curtailment of civilian use in construction has had a depressing effect, and a spotty situation exists which may react on the demand for the class of fibres required. The market for corrugated roofing and sidings is very good, as is the demand for asbestos cement pipe.

Manganese.—The Lower House of Congress has criticized the expansion programme for manganese in the United States as wholly inadequate. A review of the programme is under examination. A State controlled Company is to be formed in India aimed particularly at exploiting deposits in Orissa and developing the production of ferro-manganese.

Quicksilver.—Imports of quicksilver into the United States in the first quarter of the year were 12,805 flasks against 12,880 flasks for the previous quarter. The chief supplying countries were Spain, 7,199 flasks; Yugoslavia, 2,470 flasks; Italy, 1,462 flasks and Mexico, 1,237 flasks. Consumption for the quarter was 18,200 flasks against 15,300 flasks in the previous quarter. Quicksilver consumption in the U.S. has risen steadily since the beginning of 1950 when it was 10,600 flasks for the first quarter. The U.S. price has been lowered, but the U.K. price is unchanged at £73 10s./£74.

Sulphur.—The N.P.A. has stated that with the low supplies of stocks in the U.S.A. it will be necessary to limit allocations for newsprint, in favour of steel, petroleum, rubber and basic chemicals.

Tungsten.—The recent hardening in the price of wolfram has been reflected in that of ferro and powder, which was advanced to 35 sh. and 37 sh. respectively on Monday last. The price of tungsten has tended to appreciate further in the last few days, and we should call it about 570-580 sh. c.i.f. for June-July shipment. We have heard of material afloat being done at 580 sh.

The position in Portugal is still rather obscure. The export quota up to the end of June having been exhausted, sellers have now to wait until July before any new licences are issued. In this connection there would appear to be a great deal of uncertainty over the incidence of the Export Tax.

Gold.—Production in Colombia in February fell heavily to 20,620 f.oz. compared with 34,897 f.oz. in February, 1950.

The London Metal Market

Once again the main feature in the tin market during the past week has been the further drastic price reductions on the part of the R.F.C. By the end of last week it was hardly surprising to find that three months metal had changed hands on the London Metal Exchange down to £875, and at the same time the daily Eastern quotation recorded a steady fall. This weakness continued over the week-end until during the afternoon session in London on Monday, more resistance was apparent, due to keen buying interest for forward delivery, which resulted in a general marking up in prices; following this a sharp recovery developed in Singapore.

The general appearance of the world tin market at present is somewhat confused as a result of the American policy in so much that it is not known to what level the R.F.C. intend to reduce their price, although the opinion is held that they have in mind their previous figure of $1.03 which, in consideration of the increased costs, seems somewhat out of line. The fact remains that America will enter the market as a buyer at some future date, and when this time arrives it may well be that a considerable recovery will be witnessed.

On Thursday the official close on the tin market was: Settlement price £965, Cash Buyers £960, Sellers £970; Three Months' Buyers £932, Sellers £932 10s. In the afternoon the market was irregular. Turnover for the day was 195 tons. Approximate turnover for the week was 1,455 tons.

The Eastern price on Thursday morning was equivalent to £974 12s. 6d. per ton, c.i.f. Europe.

Iron and Steel

Considered against the background of a steadily rising demand for steel, the further shrinkage of production last month was disturbing. However, there is reason to believe that the worst is over. The recent decline in output has been entirely due to the shortage of raw materials and in this respect improvement is in sight. A number of Liberty ships which have been engaged in bringing American coal to Europe, have now been released for the transport of ores from Mediterranean ports.

The scrap position is also a little easier thanks to the success of the home scrap drive. It is learnt that the target figure—an extra 10,000 tons a week—has already been exceeded, and the Federation is now confident that the drive will produce 500,000 tons more scrap this year. This tonnage will not of course fully compensate for the decline in imports of scrap, but it is nevertheless a valuable aid to the steel industry.

Already pig iron production has taken an upward turn, and this improvement is expected to be progressive. It is also announced that the new 80 in. continuous hot strip mill at the Abbey works, Port Talbot, is ready to go into full production and with the prospect of the Margam mills starting next month the Minister of Supply has been able to promise an increase of 5 per cent in the sheet steel allocation for the motor industry.

These of course are only minor reliefs. The demand for steel far exceeds the supply and as the year advances, so also will the requirements for re-armament increase. To that extent supplies for the steel consumers may have to be reduced, and some system of allocation to ensure

equitable distribution of available tonnages is generally expected.

Any interruption of supplies would seriously affect the ship-builders whose order books are filled for at least four years ahead. Locomotive and wagon builders are heavily contracted with Commonwealth and Colonial as well as home railways and power plant constructors have an unprecedented volume of work in hand. Obviously, their steel requirements are very heavy and it will be a problem to keep them all fully supplied.

The re-rollers are still in difficulties about their supplies of steel semis, but there are hopes that the heavy arrears in the shipment of Continental material to U.K. ports may be made up in the near future. Meanwhile, the mills are almost wholly dependent on British steel works for their supplies of billets, blooms, slabs and steel-bars.

Coal

The Ministry of Fuel and Power reports the output of coal for the week ended June 16 as 4,271,200 tons, as compared with 4,218,200 tons in the previous week. Distributed stocks were 11,271,000 (10,792,000) tons. The total number of men on colliery books for the week ended June 9 was 702,100, as compared with 702,400 in the previous week.

JUNE 21 PRICES

COPPER

Electrolytic	£234 0 0 d/d

TIN

(See Metal Notes above for Thursday's Metal Exchange prices)

LEAD

Soft foreign, duty paid	£160 0 0 d/d
Soft empire, including secondary lead ...	£160 0 0 d/d
English lead	£161 10 0 d/d

ZINC

G.O.B. spelter, foreign, duty paid ...	£160 0 0 d/d
G.O.B. spelter, domestic	£160 0 0 d/d
Electrolytic and refined zinc	£164 0 0 d/d

ANTIMONY

English (99%) delivered, 10 cwt. and over	£390 per ton
Crude, (70%) ...	£305 per ton

NICKEL

99.5% (home trade)... ...	£454 per ton

OTHER METALS

Aluminium, £124 per ton.	Palladium (scrap), £8 oz.
Bismuth, 22s. 6d. lb.	Platinum, £27/£33 5s. nom.
Cadmium, 18s. 3d. lb.	Rhodium, £45 oz.
Chromium, 5s. 3d. lb.	Ruthenium, £30 oz.
Cobalt, 15s. 6d. lb.	Quicksilver, £73 10s./£74 ex-warehouse.
Gold, 248s. f.oz.	Selenium, 25s. nom. per lb.
Iridium, £65 oz. nom.	Silver (bar), 76¼d. f.oz. spot and forward.
Magnesium, 1s. 6d. - 2s. lb. according to quantity.	Tellurium, 19s. lb.
Osmiridium, £35 oz. nom.	
Osmium, £70 oz. nom.	
Palladium, £8 10s. oz.	

ORES, ALLOYS, ETC.

Bismuth	50% 14s. lb. c.i.f. 40% 13s.
Chrome Ore—	
Rhodesian Metallurgical (lumpy)	£11 per ton c.i.f.
„ „ (concentrates)	£11 per ton c.i.f.
„ „ Refractory	£10 12s. per ton c.i.f.
Baluchistan Metallurgical ...	£11 11s. per ton c.i.f.
Magnesite, ground calcined ...	£26 - £27 d/d
Magnesite, Raw	£10 - £11 d/d
Manganese, Best Indian ...	(Nominal)
Molybdenite (85% basis) ...	(Nominal)
Wolfram (65%), U.K. ...	570s./580s. c.i.f. nom.
Tungsten Metal Powder (for steel manufacture) ...	37s. nom. per lb. (home)
Ferro-tungsten	35s. nom. per lb. (home)
Carbide, 4-cwt. lots	£30 3s. 9 d/d per ton
Ferro-manganese, home ...	£37 19s. 10d. per ton
Ferro-manganese, export ...	Nom.
Brass Wire	2s. 6¼d.
Brass Tubes, solid drawn ...	2s. 0¼d.

Mining Men and Matters

Mr. William Balleny has been appointed a director of British Guiana Consolidated Goldfields on the nomination of the Colonial Development Corporation.

Mr. W. M. Clark has joined the boards of Brakpan Mines and Springs Mines.

Mr. Robert H. Cain, V.C., has been appointed general manager of the Shell Company of West Africa.

Mr. C. B. E. Douglas has retired from the position of consulting mining engineer with the U.S. Smelting, Refining & Mining Co.

Mr. K. Duraiswamier has retired from the post of Chief Inspector of Mines and Explosives in Mysore.

Dr. S. W. Fisher, who, until his retirement at the end of last year was the principal medical inspector of mines, Ministry of Fuel and Power has been appointed as consultant to the National Coal Board for a period of one year.

Mr. R. B. Harrison has left the Ariston Gold Mines and has returned to Canada.

Mr. T. Hirst, formerly director of the Geological Survey of the Gold Coast, has been appointed principal scientific officer of the Mineral Resources Division of the Directorate of Colonial Geological Surveys.

Mr. J. W. Hobday has been appointed a director of Derbyshire Stone, Ltd.

Mr. Arthur Makin has joined the board of Marshall Sons & Co. of Gainsborough.

Mr. W. A. Odgers has become a director of Rhodesia Broken Hill Development Co.

Mr. R. L. Rodda has been appointed chief surveyor of Taquah & Abosso Mines.

Mr. C. S. Ross has been appointed a director of the Wallarah Coal Co.

Mr. Fred Searls, Junior, has resigned from the board of Rhodesian Anglo American.

Mr. W. A. Starling has been appointed mine manager at the Ethel Asbestos Co. in Southern Rhodesia.

Mr. R. B. Wokes has been elected a Member of Council of the Nigerian Chamber of Mines in London.

The World Metallurgical Congress to be held at Detroit, Michigan, October 15-19, will discuss conservation and substitution for strategic metals, simultaneously with the 33rd National Metal Exposition Congress.

The Nineteenth International Geological Congress is to take place in Algiers from September 8 to 15, 1952. Enquiries should be addressed to the General Secretary of the Algerian Organizing Committee, Faculté des Sciences, Alger, Algeria.

C. Tennant, Sons & Co. Ltd. have announced that as from June 11 the address of their Non-Ferrous Metals Department will be 2/3, Philpot Lane, London, E.C.3. Telephone: Mansion House 0873. The address of the company's accounts department and head office remains unchanged.

Lead Industries Association.—Representatives of the lead mining, smelting and consuming industries attending the 23rd Annual Meeting of the Lead Industries Association held in New York City, May 17 and 18, re-elected the following officers for 1951-1952:—**Felix E. Wormser,** President; **J. A. Martino,** Vice-President; **K. C. Brownell,** Vice-President.

Summer Meeting of the I.M.E.—Detailed arrangements for the summer meeting of the Institution of Mining Engineers to be held this year at Nottingham on July 4, 5 and 6, have now been announced. The principal business of the meeting on July 4 will be the discussion of a paper on "Continuous mining at Donisthorpe Colliery," by Mr. H. B. Bennett. The Chair will be taken by the President, Sir Andrew Bryan. Excursions which are being organized on the following two days, include visits to Donisthorpe, Bestwood, and Bolsover Collieries and to the Butterley Co.

Capper Pass Awards.—The Capper Pass Awards for papers published on non-ferrous extraction metallurgy during 1950 have now been announced. They are as follows: £100 jointly to Jan Dzienisiewicz and E. J. Pryor for their paper on "An investigation into the action of air in froth flotation"; £50 jointly to R. G. Wilkinson and F. A. Fox for their paper on "The hot working of magnesium and its alloys"; £50 jointly to J. J. Hoben and J. F. Mulvey for their paper on "The new continuous brass mill of the Scovill Manufacturing Co., Waterbury, Conn., U.S.A."

The first of these papers appeared in the Bulletin of the Institution of Mining and Metallurgy and the last two in the Journal of the Institute of Metals.

The Mining Markets

(By Our Stock Exchange Correspondent)

The list of price movements below tells a gloomy tale. With few exceptions, falls occurred in mining shares of all sections. Gilts, after the short rally towards the end of last week, continued downwards. Selling by small investors was not countered by institutional support. The issue at 94 per cent of another block of coal stock carrying interest at 3½ per cent and dated 1977/80 is another indication of the direction of interest rates. Furthermore, a recent announcement by the Committee of London Clearing Bankers, foreshadows an increase of ¼ to ½ per cent in the rate of borrowing where lending rates are comparatively low. While this will be a domestic matter between Banks and their customers with the object of covering increased running costs, this trend strengthens the advocates of a higher rate of interest.

Kaffirs have had a dull week. A short rally ascribed to bear closing occurred on Tuesday, but dealings for the new account on Wednesday started with renewed selling. Recent rumours regarding good developments at Doornfontein were amply confirmed. Crosscutting on the 5th level from the Annan shaft encountered the Carbon Leader Reef. A limited amount of development carried out with shaft sinking equipment, revealed 84.2 per cent payability over 380 ft. Average values were 16 dwts over a stoping width of 45 inches making 720 inch dwts. Further development has been temporarily stopped but will be continued when the Annan shaft is sunk to its final depth, and permanent equipment is installed.

The Directors of the New Union Gold announced that dividend No. 16 of 1s. 6d. per share declared on August 29th, 1947 will be payable to shareholders registered with the company on September 19th 1947, on or about July 3rd, 1951. This dividend was the last to be declared prior to the company being placed under judicial management in October, 1947. New Union Gold was recently released from judicial management following the acceptance of an offer by the Merchants Industrial Corporation.

The trend in the Orange Free State section closely followed that for Rand mines. The market was disappointed by the poor reef values announced by Virginia Gold. The intersection in No. 3 shaft gave an average assay value of 2.24 dwt. over a width of 39.9 in., equal to 89 in. dwt. It was later emphasised in official quarters that high values were not expected, as the siting of the shaft had been dictated by geographical necessities. The reef band intersected occupied the Leader Basal reef horizon, and was cut at a depth of 1,504 ft.

The announcement of an interim dividend of 16 sh. per 5s. share by Consolidated Murchison, the antimony producer was well received, and the shares hardened to £5 10s. It is not the company's policy to hold large cash reserves. Provided the price of antimony is maintained at its present level, the company may well be able to pay a final at the same rate, to give a current yield of about 29 per cent.

The fall and subsequent rally in the price of tin was paralleled in the share market. Reports from New York indicate that the U.S. buying price may be in the region of £824 per ton. Singapore quarters estimate that most of the leading companies could operate profitably at a price of £800 per ton, but it seems probable that a number of low grade Chinese producers would be forced to close down should the price fall to that level for any length of time. Moreover, companies operating in bandit infested areas would have to consider whether the return was commensurate with the risk involved.

The oil market was disappointed with the maintained dividend by Canadian Eagle on the increased capital. Group trading profit for 1950 was £4,941,779 compared with £5,280,855 for 1949. The latter figure, however, included an exceptional exchange profit of £800,000.

	Price June 20	+ or − on week
FINANCE		
African & European	3⅞	+ ⅛
Anglo American Corpn.	7⅛	− ⅛
Anglo-French	23/9	
Anglo Transvaal Consol.	43/9	−2/6
Camp Bird	12/4½	−4½d
Central Mining (£1 shrs.)	42/6	−1/3
Consolidated Goldfields	2⅛	− ⅛
Consol. Mines Selection	35/-	−7½d
East Rand Consols	4/1½	
General Mining	5½	− ½
H.E. Prop.	38/9	−6d
Henderson's Transvaal	10/6	−1½d
Johnnies	3½	− ⅛
Rand Mines	7	− ½
Rand Selection	38/9	−1/3
Union Corporation	10½	− ½
Vereeniging Estates	6	+ ⅛
Writs	32/6	−6d
West Wits.	2⅛	− ⅛
RAND GOLD		
Blyvoors	48/9XD	−1/-
Brakpan	19/-	−3d
City Deep	2⅞XD	− ⅛
Consol. Main Reef	2 1/16XD	− ⅛
Crown	4 ⅛XD	+ ⅛
Daggas	3⅛	− ⅛
Dominion Reefs	1/9	
Doornfontein	28/-	+3d
Durban Deep	3½XD	
E. Daggas	23/9	−7½d
E. Geduld ... (4/- units)	2⅛	− ⅛
E. Rand Props.	3⅜XD	− ⅛
Geduld	7⅛	
Grootvlei	36/3	−2/6
Libanon	15/9	
Luipaards Vlei	21/3	−9d
Marievale	21/-XD	−1/3
Modderfontein B	5/6	−3d
Modderfontein East	2⅛	
New Kleinfontein	33/9	
New Pioneer	23/9	−7½d
Randfontein	18/3	−6d
Robinson Deep	13/6XD	−6d
Rose Deep	37/6	
Simmer & Jack	6/-	−6d
Springs	9/10½	−1½d
Sub Nigel	3⅛XD	− ⅛
Van Dyk	15/-	
Venterspost	28/9XD	−1/3
Vlakfontein	16/10XD	+7d
Vogelstruisbult	25/9XD	−3d
West Driefontein	5⅜	−½
W. Rand Consolidated	40/-	−1/3
Western Reefs	36/10½	−7½d
O.F.S.		
Alpha F.S.A.	12/9	
Blinkpoort	23/9	
Central Mining F.S.	4/9	
Freddies	11/6	−1/-
Freddies N.	10/-	−2/-
Freddies S.	12/3	−3d
F.S. Geduld	3½	−¼
Geoffries	26/-	−1/9
Harmony	23/6	−3d
Lydenburg Estates	10/-	+6c
Middle Wits	21/3	−1/3
Ofsits	2⅛	− ⅛
President Brand	21/-XR	−9d
President Steyn	16/6	
St. Helena	30/7½	+7½d
U.F.S.C. & G.	8/6	−3d
Virginia Deb.	73	−1
Virginia Ord.	13/9	−1/6
Welkom	38/9	+1/3
Western Holdings	3⅛	− ⅛
WEST AFRICAN GOLD		
Amalgamated Banket	2/3	−1½d
Ariston	7/-	−3d
Ashanti	27/6	−9d
Bibiani	10/6	−6d
Bremang	3/6	−1½d
G.C. Main Reef	3/7½	−1½d
G.C. Selection Trust	9/9	−1½d
Konongo	1/7½	
Kwahu	4/3	−3d
London & African Mng.	2/4½	−3d
Lyndhurst Deep	1/-XD	
Marlu	2/4½	−1½d
Nanwa	11½d	
Taquah & Abosso	7/-	−3d
AUSTRALIAN GOLD		
Boulder Perseverance	2/9	
Gold Mines of Kalgoorlie	16/3	
Great Boulder Prop.	6/3	
Great Western Consol.	2/-	+6d
Lake View and Star	20/3	−6d
Mount Morgan	20/3	
North Kalgurli	16/10½	−4½d
Paringa	8d	−1d
Sons of Gwalia	12/-XD	−3d
South Kalgurli	10/-	
Western Mining	7/4½	
Wiluna	11/6	
MISCELLANEOUS GOLD		
Cam and Motor	32/6	−1/10½
Champion Reef	9/-	−6d
Falcon Mines	11/6	−4½d
Globe & Phoenix	21/6	−1/3
MISCELLANEOUS GOLD (contd)		
G.F. Rhodesian	8/-	−9d
London & Rhodesian	6/-	
Motapa	2/9	−1½d
Mysore	6/3	
New Guinea	1/7½	
Nundydroog	7/6	−6d
Ooregum	3/6	−3d
Oroville	12/6	
St. John d'El Rey	34/4½	−1/1½
Zams	35/-	
DIAMONDS		
Anglo American Inv.	4½	− ½
Casts	37/9	−2/-
Cons. Diam. of S.W.A.	3⅜XD	+ ½
De Beers Defd. Bearer	60/3	−1/6
De Beers Pfd. Bearer	16½XD	− ½
COPPER		
Chartered	72/-	−3/-
Indian Copper	5/-	−3d
Messina	5⅛	− ½
Nchanga	7⅜	− ⅛
Rhod. Anglo-American	61/3	−3/-
Rhodesian Selection	38/3	−2/9
Rhokana	21½	−1½
Rio Tinto	20½	− 1
Roan Antelope	20/4½	−1/9
Selection Trust	50/-	−2/6
Tanks	47/-	+9d
Tharsis Sulphur Br.	53/9	−1/3
TIN (Eastern)		
Anglo-Burma	3/3	−3d
Aver Hitam	29/-XD	−1/-
Bianjan	35/-	−1/6
Gopeng	13/6	−1/-
Hongkong	11/6	−9d
Ipoh	28/9	−1/3
Kamunting	13/1½	−6d
Kepong Dredging	12/3XD	−1/-
Kinta Tin Mines	15/9XD	−1/9
Kramat Pulai	4/4½	
Malayan Dredging	24/3	−4½d
Pahang	15/1½	−1/4½
Pengkalen	10/6	−1½d
Petaling	12/-	−3d
Rambutan	1⅝/-	−1/3
Siamese Tin	24/3	−9d
Southern Kinta	13/3	−6d
S. Malayan	29/9	−1/6
S. Tronoh	22/6XD	−9d
Sungei Kinta	19/4½	−4½d
Tekka Taiping	10/-	−3d
Tronoh	28/6XD	−1/6
TIN (Nigerian and Miscellaneous)		
Amalgamated Tin	11/-	−6d
Beralt Tin	26/6	
Bisichi	4/4½	−4½d
British Tin Inv.	17/3	−6d
Ex-Lands Nigeria	7/4½	−4½d
Geevor Tin	16/6	−9d
Gold & Base Metal	3/9	−3d
Jantar Nigeria	7/-	−4½d
Jos Tin Area	11/6	
Kaduna Prospectors	4/-	−3d
Kaduna Syndicate	6/3	−3d
London Tin	5/1½	
Ribon Valley	1/3	
United Tin	2/9	−1½d
SILVER, LEAD, ZINC		
Broken Hill South	57/6	−1/3
Burma Corporation	4/-	−1½d
Consol. Zinc	37/-	−9d
Lake George	28/-	−9d
Mining Trust	5/4½	+3d
Mount Isa	46/6	−3d
New Broken Hill	30/6XD	−1½d
North Broken Hill	79/-	+1/-
Rhodesian Broken Hill	19/3XD	−2/-
San Francisco Mines	36/3XD	−6d
Trepca	3/9	−1½d
MISCELLANEOUS		
BASE METALS & COAL		
Amal. Collieries of S.A.	62/6	−9d
Associated Manganese	67/6	−5/6
Chinese Engineering	2/3	
C.P. Manganese	54/4½	−10½d
Natal Navigation	5⅜	− ⅛
Wankie	24/-	−4½d
Witbank Colliery	4⅛	− ⅛
CANADIAN MINES		
Dome	$28	−1
Hudson Bay Mining	$114	−3
International Nickel	$73½	−1½
Mining Corpn. of Canada	£6½	− ½
Noranda	$144	−1½
Quemont	£8½	
OIL		
Anglo-Iranian	5⅛	− ⅛
Apex	48/1½XD	−7½d
Attock	28/1½	−1/3
Burmah	61/10½	−5/1½
Canadian Eagle Bearer	35/-XD	−5/1½
Mexican Eagle	23/1½	−7½d
Shell	4⅜	− ⅛
Trinidad Leasehold	29/-	−1/6
T.P.D.	40/9	−1/9
Ultramar	33/-	−1/9

Company News & Views

Mr. Govett Attacks Finance Bill

At this week's annual meeting in London of the Consolidated Zinc Corporation, the chairman, Mr. John R. Govett, indulged in some plain speaking with regard to Section 32 of the Finance Bill. Pointing out that this section would not only make it unlawful for a company to move its residence abroad, but also to convert its overseas branches into subsidiary overseas companies, or even to issue additional capital in existing overseas companies without Treasury consent, he went on to observe that "the proposed legislation strikes at the very heart of businesses such as ours, which are dependent on overseas operations, and in which it is not only our aim and desire, but also necessary in the interests of the business and this country, where the majority of shareholders reside, to meet the national requirements of—in our case—Australia, or any other country where we may be operating."

Reminding shareholders that some twelve companies in their group were domiciled in Australia, where their interests lay, and that the Zinc Corporation itself, although registered in this country had played an important part in the development of industries vital to Australia, he pointed out that many of the transactions which had been entered into in the course of these developments would, under the proposed Bill in future only be permissible with Treasury consent. It was difficult, he said, to understand a policy which ignored the desirability of a partnership of interests with the nationals of developing countries, which was of particular importance if this country were to continue to receive the benefits of the overseas resources on which we so greatly depended. "Other countries," he added, "have governments and treasuries, too, and we will reach an unhappy state should they elect to prohibit the transfer of profits or materials accruing to United Kingdom companies operating within their territory. It is far from unheard of already."

Consolidated Zinc Strengthens Reserves

The buoyancy of lead and zinc prices during 1950, so far as producers are concerned, is favourably reflected in the results of The Consolidated Zinc Corporation and New Broken Hill. They control the biggest production group in the Commonwealth. Consolidated Zinc has wide interests in the industrial field both in Australia and this country, principally in the metal fabricating and chemical trades. A large interest is held in the Imperial Smelting Corporation, which controls companies producing zinc and zinc alloys, sulphuric acid, fertilisers, etc., while in Australia a somewhat similar organisation operates under the aegis of the two subsidiaries—Broken Hill Associated Smelters and Sulphide Corporation.

The main producing mine of the group is on the property of Zinc Corporation where operations during 1950 were on a slightly lower scale due to shortage of labour. Tonnage crushed was 389,993 against 439,947 tons; metal outputs being lower at lead 57,082 (against 61,442) tons; zinc concentrates 75,619 (86,481) tons, and silver 1,160,077 (1,291,897) oz. Ore reserves at December 31 showed an increase of 200,000 tons at 5,100,000 tons on the lead lode and 450,000 (same) tons on the zinc lode.

Consolidated profits in 1950 (the second year of the Consolidated Zinc's existence) amounted to £4,570,800, an increase of £1,117,371. Income tax increased by £933,692 to £3,011,419, and allowing for minority interests the net balance after tax was £1,429,680, an increase of £491,108. The dividend is maintained at 12½ per cent (2s. 6d. per share). The chairman, Mr. Govett, said at the annual meeting this week that he was compelled to emphasise the need of preserving adequate resources to meet the emergencies which must be anticipated in the critical time which lies ahead. Our dependence on fluctuations in the American economy had to be considered and in addition, there were the normal fluctuations resulting from rearmament and eventually from turning back to a peace-time economy.

New Broken Hill again pays 30 per cent

Increasing importance attaches to the New Broken Hill property, which adjoins the Zinc Corporation ground. This mine began production in 1945 and has had to contend with the difficulties of the post-war period in its initial years, but substantial and encouraging progress has been made, and by the time the ten-year development programme is completed, the mine is likely to rival its established neighbour. As with the Zinc Corporation, the directors decided not to increase the 1950 dividend beyond the 30 per cent (1s. 6d. p.s.) paid in the previous year, although the profit of £930,941 represents an increase of £237,927 over 1949. The decision not to increase the dividend was due partly to those fears which Mr. Govett has also expressed to shareholders in Consolidated Zinc. Furthermore, the company requires substantial sums to complete the equipment and development of the mine. Tonnage milled last year was rather lower at 209,017 (against 224,033), and production was: lead 20,908 tons (19,869); zinc 23,817 tons (25,430); silver 439,449 ozs. against 417,762 ozs.

Western Mining Corporation Progress Report No. 6

Progress Report No. 6 of Western Mining Corporation covers the 12 weeks' period to March 27, 1951, the end of the operating year of its associated companies. In comparison with the period of 40 weeks to January 2, 1951, mining developments on the whole may fairly be described as encouraging. At Central Norseman the Phoenix mine 61.0 per cent of 851 feet advanced indicated 13.2 dwt. per ton over a width of 61 in., against payability of 40.0 per cent., 8.3 dwt. and 57 in. respectively for the earlier period of 40 weeks. At Princess Royal higher values were also disclosed, 60 per cent of ore developed averaged 23.9 dwt. over 52 in., in contrast to 15.3 dwt. over 60 in., likewise for the earlier period mentioned. Meanwhile, an extensive drilling campaign was undertaken during the year at these two mines. Among outstanding items of development at the Phoenix mine on No. 27 level the south drive from 6040 winze advanced 316 ft. on what is described as a "strong reef" averaging 15.7 dwt. over 68 in., while in the north drive from the same winze for 9 ft. assayed 55.2 dwt. over 54 in. At Princess Royal, after an advance of 4 ft. to 414 ft. sinking was suspended at 400 ft. to enable development of a "rich flat reef" exposed at this horizon. On No. 4 level drives north and south for a total length of 106 ft. showed an average grade of 40 dwt., while from this level boreholes intersected a further strong high-grade reef at a lower level, where it apparently passes underfoot at No. 7 level. The last 95 ft. of the North drive indicated a "strong reef" averaging 8.6 dwt. over 57 in.

At New Coolgardie Gold Mines during the 12 weeks to March 27, 1951, 11,448 tons of ore were treated yielding 5,788.4 f.oz., value 10.11 dwt. per ton, against 29,679 tons for the earlier 40 weeks yielding 14,401 fine ounces, value 9.70 dwt. per ton. During the last mentioned period development at the Surprise mine disclosed a total percentage of 29.0 in payable ore value 20.0 dwt. over 68 in. At the Barbara mine for the 52 weeks of the operating year payability averaged 39.2 per cent, value 14.5 dwt. over 54 in. The

main shaft at the Surprise mine was advanced a further 71 ft. to 504 ft., and cutting of No. 3 level is in progress. Incidentally, it is not without interest that at the White Hope mine on the Hampton Plains field good values are being obtained in both North and South drives on the 550 ft. level, where the orebody is reported to be strongly defined with an average value of 10 dwt. At the Barbara mine excellent values have been obtained on No. 3 level where the North Lode exposed ore for 90 ft. having an assay value of 15.4 dwt. over 50 in.; on the South Lode a "subsidiary shear" 150 ft. averaging 18.5 dwt. over 69 in. and No. 11 Lode a total of 157 ft. with an average value of 12.3 dwt. over 49 in.

Production of Gold Mines of Kalgoorlie for the operating year amounted to 42,560 f.oz. from 163,108 tons milled, or 5.22 dwt. per ton. A total of 9,608 ft. developed and 2,122 sampled averaged 7.0 dwt. over 59 in. In the Iron Duke shaft, No. 7 level, North drive 722 from 64 ft. to 121 ft., though showing signs of irregularity, averaged 13.4 dwt. over 61 in. In New North Boulder shaft better values were disclosed on the Collins Lode where values are given as 17.3 dwt. over 72 in.

Frontino's Satisfactory Progress

Despite appalling conditions which included a cloudburst, numerous land-slides and exceptionally heavy rains, Frontino Gold Mines, the Colombian gold producer during the calendar year, 1950, crushed 88,260 tons, or 14,177 tons more than the previous year. The average heads value was also higher, rising by 0.89 dwt. per ton to 11.24 dwt. per ton, so that the gold and silver recovered in fine ounces at 46,458 and 42,320 respectively, was appreciably higher than in the previous year when 36,471 f.oz. gold and 40,286 f.oz. silver were recovered.

The delay in delivery of equipment essential to the development programme was responsible for the decline in footage advanced by 1,355 ft. to 4,367 ft. However, the necessary equipment has, since the end of the financial year, arrived at the company's property. Although the ore reserves show a small drop at 186,921 tons compared with 192,100 tons, this was largely attributable to the increased mine production which was not countered by an increase in the development footage. Operating costs for the year were recorded at 37.20 pesos per ton milled and the consulting engineer's report points out that as it has been calculated by a new costing method, the figure is not comparable with costs for previous years.

Profit for 1950 amounted to £50,963 compared with £46,120 in the preceding year. Taxation required £25,613 (£1,329) and the dividend distributions on both the Ordinary stock of 2s. per £1 stock, and a similar distribution on the Preference shares of 1s. each was the same as in 1949, and absorbed a total net amount of £12,993. The sum of £12,000 against £25,000 was transferred to general reserves, leaving the forward balance higher at £59,754 against £59,351 previously.

Plans to increase the company's mill capacity to 10,000 tons per month are well advanced, and the increased production should be reached by the end of this month.

Outlook Favourable for Mason & Barry

Mason & Barry, whose San Domingos Mines in Portugal was held on a lease until 1958, has completed an agreement with the La Sabina Co., the original lessees of the mine, and with the Portuguese Government to extend their operating rights for a further fifty years. But the number of years during which it will be possible to continue raising pyrites during this extended term will depend on the tonnage of fresh reserves of pyrites disclosed on the deeper levels. At the end of 1950 reserves were calculated and estimated to be approximately 1,800,000 tons.

Profit and loss account for the calendar year 1950 showed that earnings had risen to £93,981 against £76,979 in 1949. The net profit after providing £40,973 in taxation was £25,869 compared with £21,083 previously. Special reserve received £11,000, the dividend of 15 per cent or 3s. per share (10 per cent) absorbed £14,582 leaving the carry forward slightly higher at £33,202 against £32,916.

The appropriation of £11,000 to a special reserve mentioned above follows on the decision of the board to carry out an extensive diamond drilling programme.

Commenting on the output for the current year the chairman, Mr. James Cross Brown, states that the company has a good order book and, if nothing untoward happens the company can look forward to a satisfactory year.

Ultramar Reduced Debit Balance

Consolidated results for the calendar year 1950 of the Ultramar Co., which was formed to operate and develop oil concessions in Venezuela, reveal a profit of £119,801 (£11,935), which has been applied to reducing the adverse group balance which now stands at £28,715. This figure was arrived at after meeting all the usual charges, including £65,805 (£61,250) interest on the loan from the Finance Corporation for Industry, and deducting £111,152 (£8,475) attributable to outside shareholder

The revenue of Ultramar itself was £30,461 but after meeting administration and interest charges a loss of £59,346 resulted, thereby increasing its debit balance carried forward to £351,432.

In a report by Professor V. C. Illing on the Mercedes properties operated during 1950, appended to the Report and Accounts, it is stated that towards the end of the year under review one important new extension to the Mercedes field took place "when a new block east of the main field was discovered, containing excellent oil sands in the Basal La Pascua. The development of this new area has been proceeding rapidly since the end of the year, but its limits are not yet known.

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Rand Mine Returns for May

Although there were no very marked changes in the May outputs of the Rand mines, the longer month resulted in increased tonnages being dealt with, profits in the majority of cases were higher and costs down. Two mines crushed the same amount of ore as in April and the remainder dealt with more. Profits of 30 mines were higher; 12 lower. The unit costs of 24 producers were lower, 15 higher and 3 mines worked at the same figure as in the previous month.

Outstanding in the Central Mining group was Blyvoor's statement disclosing a new tonnage record and an increase of £42,800 in profit to the new "high" of £650,508. Other mines to increase their profits were Consolidated Main Reef by £5,375, Durban Deep by £6,430, East Rand Props by £15,900. Crown Mines, City Deep and Rose Deep returned much lower profits—the two latter with Modder B working at a higher figure of costs.

All the Gold Fields members dealt with bigger tonnages and all announced higher profits with the exception of Venterspost whose costs with those of Libanon and Rietfontein increased. Robinson Deep's profit was £1,058 higher; and that of Simmer & Jack, £1,955, while Sub Nigel registered an increase of £7,900

A mixed showing was made by members of the Anglo American group. The profits of Daggafontein and East "Dagga" were down but those of the other producers showed an increase. Western Reef's tonnage was a record, profit was £1,342 up and working costs of 32s. 9d. per ton were the same as in April.

Union Corporation subsidiaries all crushed larger tonnages and announced bigger profits with the exception of Van Dyk. Geduld and East Geduld worked at the same figure of costs as in the previous month.

Although larger tonnages were dealt with by "Johnnies" gold producers and costs were down in the case of four mines, only one, Government Areas registered a slightly higher profit. Randfontein's costs dropped by 2s. 2d. per ton but the grade of ore being lower, resulted in the profit declining by £80. New State Areas profit was £1,000 down, as likewise that of Wit. Gold. The profit of Rand Leases (Anglo Transvaal group) showed an increase of £4,000.

SOUTH AFRICA

Alpine (B).—3,000 tons yielded 600 oz.
Blyvoor.—105,000 tons yielded 70,907 oz.; profit £650,508.
Brakpan.—117,000 tons yielded 21,977 oz.; profit £62,157.
City Deep.—168,000 tons yielded 33,852 oz.; profit £73,740.
Consul M.R.—197,000 tons yielded 26,498 oz.; profit £53,545.
Crown.—291,000 tons yielded 47,742 oz.; profit £107,949.
Daggafontein.—237,000 tons yielded 58,518 oz.; profit £443,933.
Dominion Reefs.—32,500 tons yielded 2,431 oz.; profit £1,179.
Durban Roodepoort.—188,000 tons yielded 32,002 oz.; profit £107,411.
East Champ D'or.—35,000 tons yielded £62,516; profit £11,111.
East Dagga.—100,000 tons yielded 18,373 oz.; profit £81,954.
East Geduld.—150,000 tons yielded 45,021 oz.; profit £369,744.
E. Rand Prop.—232,000 tons yielded 47,182 oz.; profit £198,982.
Geduld.—108,000 tons yielded 15,944 oz.; profit £48,000.
Govt. Areas.—243,000 tons yielded £400,850; profit £60,566.
Grootvlei.—200,000 tons yielded 44,998 oz.; profit £306,794.
Libanon.—88,000 tons yielded 16,150 oz.; profit £51,744.
Luipaards Vlei.—106,000 tons yielded 19,617 oz.; profit £64,912.
Marievale.—63,000 tons yielded 15,627 oz.; profit £78,467.
Modder "B."—56,000 tons yielded 6,366 oz.; profit £10,041.
Modder East.—124,000 tons yielded 14,474 oz.; profit £43,381.
New Kleinfontein.—111,000 tons yielded 14,377 oz.; profit £43,061.
New Modder.—23,500 tons yielded 2,731 oz.; profit £1,511.
New State.—65,000 tons yielded £94,001; profit £2,421.
Nigel.—36,500 tons yielded 4,883 oz.; profit £2,945.
Randfontein.—365,000 tons yielded £500,574; profit £50,018.
Rietfontein.—28,000 tons yielded 6,233 oz.; profit £32,556.
Robinson.—117,000 tons yielded 18,428 oz.; profit £15,128.
Rose Deep.—84,000 tons yielded 11,785 oz.; profit £20,434.
Simmer & Jack.—131,000 tons yielded 20,793 oz.; profit £34,218.
S.A. Lands.—115,000 tons yielded 20,190 oz.; profit £81,376.
South Roodepoort.—28,000 tons yielded 6,166 oz.; profit £24,009.
Spaarwater.—10,700 tons yielded 2,439 oz.
Springs.—169,000 tons yielded 21,886 oz.; profit £33,605.
Sub Nigel.—69,000 tons yielded 24,771 oz.; profit £147,812.
Van Dyk.—103,000 tons yielded 15,889 oz.; profit £20,964.
Venterspost.—106,000 tons yielded 22,260 oz.; profit £85,258.
Vlakfontein.—39,000 tons yielded 14,489 oz.; profit £85,533.
Vogelstruisbult.—80,000 tons yielded 20,264 oz.; profit £87,164.
Welgedacht.—34,500 tons yielded 4,011 oz.; profit £4,115.
West Rand Cons.—220,000 tons yielded 35,203 oz.; profit £173,158.
Western Reefs.—100,500 tons yielded 22,496 oz.; profit £115,391.
Wit. Gold.—62,000 tons yielded £86,058; profit £2,539.
Wit. Nigel.—10,000 tons yielded £32,353; profit £2,283.

DIVIDENDS

Anglo-Transvaal Collieries Pref. 1.8d.; Ord. 2.4d.
Anglo-Transvaal Industries Pref. 6.6d.
Anglo-Transvaal Con. Investment 6% Cum. Pref. 7.2d.; 5% Cum. Red. Pref. 6d.; Ord. 2s. 6d.; Part. Pref. 2s. 3d.
Amalgamated Metal Corporation 7%
Amalgamated Collieries of South Africa 5% *i* (Aug. 8)
Apex (Trinidad) Oilfields 10% *i* (July 25)
Associated Manganese Mines of S. Africa Pref. 2.1d.; Ord. 3s. 9d.
Ayer Hitam Tin 1s. *i* (July 19)
City Deep 3s. (Aug. 8)
Cons. Diamond Mines of S.W. Africa 30% *i*
Cons. Main Reef 3s. 6d. (Aug. 8)
Crown Mines 5s. 6d. (Aug. 8)
Cons. Murchison Ord. 16s.
Cons. Rand Investment and Trust 6%
De Beers Cons. Mines 10s. (July 28)
Durban Roodepoort Deep 2s. 6d. (Aug. 8)
East Champ d'Or 4½d. (Aug. 8)
East Geduld Mines 2s. 1d. (Aug. 8)
East Rand Proprietary 2s. 6d. (Aug. 8)
English China Clays 1¾% * (July 7)
Fresnillo Co. 60.2½c. (July 9)
Geduld Proprietary 7s. 3d. (Aug. 8)
Gloucester Manganese Mines Ord 3s.
Government Areas 1s. 1½d. (Aug. 8)
Grootvlei Proprietary 1s. 6d. (Aug. 8)
Idris Hydraulic Tin 5% (July 17)
Kinta Tin Mines 12½%; 20% *i* (June 30)
Marievale Consolidated 1s. (Aug. 8)
Modderfontein East 3s. (Aug. 8)
Natal Navigation Collieries 15%
Nchanga Consolidated Copper 37½%
New State Areas 7½d. (Aug. 8)
Randfontein Estates 1s. 3d. (Aug. 8)
Rand Leases Ord. 2s.
Rhodesia Broken Hill Development 45%
Rose Deep 2s. 9d. (Aug. 8)
S. Roodepoort Main Reef Areas 7½%
Sons of Gwalia 2s. (July 25)
S. African Coal Estates 2s. 3d. (Aug. 8)
Springbok Colliery 6d. (Aug. 8)
Sungei Besi Mines 7.1/5d. (July 20)
Scottish Australian Mining 6% (July 19)
South Kalgurli Cons. 25% *i* (July 25)
Transvaal Navigation Collieries 5% (Aug. 14)
Transvaal Nigel Pref. 3.12d.
Tanjong Tin Dredging 5%; 25% *i* (July 7)
Vereeniging Estates 10% *i* (Aug. 17)
Vereeniging Brick and Tile 5d. *i* (Aug. 17)
Vereeniging Brick and Tile 2¾% (June 30)
Village Main Reef Gold Ord. 1.8d.
Witwatersrand Gold 1s. 6d. (Aug. 8)
Wright Anderson (S. Africa) Pref. 6.6d.
West Rand Consolidated Ord. 15% *i*; Def. £4 5s. *i*

i interim • Tax free

Company Shorts

N. Rhodesian Copper Companies to Capitalize Reserves.—Further particulars are now available of the bonus share issues proposed for Rhodesian Selection Trust and Roan Antelope and Mufulira Copper Mines (see *Mining Journal* of May 25, page 510). Extraordinary general meetings of these three companies will be held in the third week in July to approve capitalization of reserves aggregating nearly £10,000,000, and to issue bonus shares for the same amount. At the same time the companies are to adopt new Articles of Association. The main proposals for consideration at the forthcoming extraordinary meetings are as follows:

Roan Antelope.—The nominal capital is to be increased from £5,000,000 to £10,000,000, and at the same time the issued capital of the company (now standing at £4,993,160) is to be increased by a further £3,994,528 by the issue of 15,978,112 fully paid 5s. bonus shares. These will be allotted to shareholders registered in the books of the company on July 2 in the proportion of four new shares for every five units of Ordinary stock or shares of 5s. each held by them. Allotment letters will be despatched after the extraordinary general meeting on July 18. The meeting will also be asked to increase the maximum amount of additional remuneration payable to directors from £8,000 to £20,000 per annum. It is also proposed that in the new Articles the present restriction on the power of directors to sell the whole or part of the undertaking without the consent of a general meeting should be deleted. The new Articles also provide for an increase in the maximum number of directors from 12 to 15.

Mufulira.—The nominal capital is to be increased from £5,000,000 to £10,000,000, and at the same time the issued capital (now standing at £4,888,874) is to be increased by a further £3,259,249, by the issue of 3,259,249 bonus shares of £1 each. These will be allotted to shareholders registered in the books of the company on July 9 in the proportion of two new shares for every three held. Allotment letters will be despatched after the extraordinary general meeting on July 19. In adopting new Articles of Association, the meeting will also be asked to increase directors' borrowing powers from the present limit of £2,500,000 up to a sum not exceeding the amount of the company's paid up capital. It is also proposed to increase the maximum amount of additional remuneration payable to directors from £8,000 to £20,000 per annum, and to restore to them certain powers which were curtailed in 1931 in connection with borrowing arrangements then made, including in particular, the right to issue shares as consideration for property to be acquired and a power to mortgage and dispose of the company's assets. The new Articles also provide that the maximum number of directors may be 15 instead of 13 as at present.

Rhodesian Selection Trust.—Subject to the above Mufulira proposals being approved, shareholders of R.S.T. which has a 64 per cent interest in the issued capital of Mufulira, will be asked to raise the nominal capital of their company from £2,750,000 to £5,500,000, and to increase the issued capital (now standing at £2,646,932) by a further £2,464,922 15s. by the issue of 10,587,691 5s. bonus shares. These will be allotted to shareholders registered in the books of the company on July 9, and allotment letters will be despatched on July 23 (the meeting having been called for July 19). New Articles of Association will also be before the meeting.

Tax Concessions for Rand Uranium Producers.—Adjustments in the taxation of gold mining companies producing uranium are provided for in a new finance bill introduced recently by Mr. Havenga (the Finance Minister) in the Union Assembly. The Bill allows gold mining companies operating on Government leases, in determining profits, to merge all expenditure and revenue in connection with the recovery of uranium with expenditure and revenue in connection with gold mining. In addition, it provides that, in determining profits of which a share is payable to the State in terms of a mineral lease, the interest on money borrowed for the purpose of producing uranium may be deducted.

Wage Increases for 18,000 South African Miners.—Higher wages for 18,000 mine workers, retrospective to January this year, were agreed upon recently by the Transvaal Chamber of Mines Gold Producers' Committee and three mining unions, viz.: the Mine Workers' Union, the South African Engine Drivers' and Firemen's Association, and the South African Reduction Workers' Association.

The main points of the agreement are: increases of 2d. an hour for employees paid on an hourly basis; 1s. 4d. a shift for employees paid on a shift basis and £2 monthly for paid employees.

Ampat Tin puts £70,000 to Reserve.—The net profit of Ampat Tin Dredging for the year 1950 amounted to £123,316 compared with £45,241 in the preceding year. This result is the more impressive when it is seen that it was arrived at after paying £97,000 into the coffers of H.M. Treasury in taxation, and a further £69,038 paid to the Government of Malaya as export duty on production. Shareholders received 15 per cent (10 per cent), which absorbed £19,688, leaving the forward balance higher by £1,628 at £55,496.

Undoubtedly the dividend would have been stepped up much higher if it had not been for the fact that it was necessary for the company to put £70,000 to the revenue reserve for contingencies, bringing this account up to £120,000. This was made necessary by the breakdown of negotiations with the Malayan Government on the question of a loan to cover the cost of transferring the company's Tujoh dredge to the Kent Estate area. The removal and reconstruction of this dredge is estimated to cost £290,000, of which £91,000 has already been paid, leaving a balance to be found of £199,000. Although Communist forces were active in the district, the company's property or personnel were not affected. The total tonnage tin concentrate recovered during the year was 853 tons, which compared with 790 tons recovered in 1949. In addition, the amount realized from the sale of gold was £3,441.

Potgietersrust Platinums Participate in Rustenburg's Offer.—In a circular to shareholders, Potgietersrust Platinums announced that the directors of Rustenburg Platinum Mines have decided to double the scale of that company's operations, and that at an extraordinary general meeting of Rustenburg Platinum Mines held on May 30 last, the capital of that company was increased from £606,000 to £808,000 in 808,000 shares of £1 each by the creation of 202,000 new shares of £1 each, to meet the cost of the envisaged expansion programme. The 202,000 new shares will be offered to the three shareholding companies of Rustenburg Platinum Mines for subscription in the proportion of their holding in that company, at the price of £12 per share. Potgietersrust Platinums holds a 43.316 per cent interest in Rustenburg Platinum Mines and therefore will be entitled to take up 87,500 shares at the price of £12 per share.

A circular will be sent to shareholders on or about July 16 next announcing the date of an extraordinary general meeting to consider a special resolution to increase the capital of Potgietersrust Platinums to provide funds to take up its 87,500 new shares in Rustenburg Platinum. The directors of Potgietersrust also state that in the event of the authorized capital being increased such new shares as are issued will not rank for dividend purposes in respect of the financial year ending August 31, 1951.

Tweefontein Maintains Dividend.—The total sales of coal of Tweefontein United Collieries for 1950 amounted to 1,344,804 tons, a decrease of 4,515 tons compared with the previous year. The reduction in coal sales, the directors point out, was due to a temporary trade recession during the opening months of the year under review. Subsequently, they add, output and sales were well maintained in spite of an inadequate supply of railway trucks. Net profit for the year after providing £18,328 in taxation, was £13,738 against £14,711 previously. A dividend payment of 30 per cent for the year (same) absorbed £9,450. The carry forward totalled £12,153 against £10,778 previously.

During the current year a fire occurred in one section of the mine, but this was successfully localized and it is hoped that the mining revenue of the current year will not be seriously affected.

Morning Star (G.M.A.) Mines N.L.—At an extraordinary meeting of this company to be held early in July, it will be proposed that the electrification of the company's mine at Woods Point and connection to power mains of the State Electricity Commission, be carried out; that the company's capital be increased from £A.80,000 to £A.100,000 by the creation of 100,000 new shares of 4s.A. each. Subject to approval by shareholders, it is intended to provide a part of the finance necessary to execute these proposals, by the issue of the 100,000 shares of 4s.A. each at a premium of 6s.A. per share on the basis of one new for every four held. Application has been made in Australia for Capital Issues consent to this issue. Full details of the proposal will be sent to members on or about June 20.

Miami Copper Company.—For the calendar year 1950 the consolidated net profit, without deduction for depletion, of this Miami property was $1,643,403. Dividends paid amounted to $1.75c.

Lyndhurst Deep Net Profit—a Correction.—In discussing (in this column last week) under "Company News and Views" the results of Lyndhurst Deep Level (Gold and Silver) for 1950, the net profit after providing for taxation and depreciation was incorrectly given. The figure of profit for 1950 after depreciation and tax, and including refund on gold duty for 1949 of £3,862, should have read £21,759 compared with £15,598 for 1949.

Topical News in Brief

Spanish Minerals for Holland.—Under a trade agreement valid for the year to June 1, 1952, Spain will export to Holland iron ore, pyrites, zinc ore, lead and potash.

Sulphur Shortage Restricts Cellulose Film Supplies.—The Board of Trade announces that because output of cellulose film is now restricted by the sulphur shortage, it may no longer be supplied for certain uses in the home market.

Titanium Ore Discovered in Quebec.—Another discovery of titanium ore has been reported in Quebec to the north of Montreal. The Premier of the Province, in giving this news said that if the discovery turned out as excellent as first reports indicated it would constitute another "gigantic development."

Argentine Fuel Supplies.—In 1950, Argentina imported 1,500,000 tonnes of coal and 5,500,000 tonnes of petroleum—the latter being supplemented by 3,500,000 tonnes from the country's oilfields, to meet the national demand of 9,000,000 tonnes of liquid fuel per year.

Cyprus Mineral Exports in February.—The official returns of the exports from the Island of Cyprus in February were valued at £642,547; details are as follows: cupreous concentrates, 19,065 tons (£508,000); cupreous pyrites, 5,340 tons (£27,600); iron pyrites, 30,201 tons (£82,669); asbestos, 336 tons (£16,089); umber, 861 tons (£7,767); gypsum, 108 tons (£332); number of miners was 4,252.

Sweden's Large Iron Ore Reserves.—Iron ore deposits in the northern parts of Sweden will suffice for another two centuries at the present rate of mining and ample deposits are also available in Central Sweden, according to a recent statement by Dr. P. Geijer, the retiring head of the Geological Survey of Sweden. According to Dr. Geijer, it is unlikely that any finds of large and rich deposits will be made in the future, although it is possible that prospecting may reveal large, but relatively poor deposits.

International Aluminium Developments.—With continued improvement in the supply of electric power, the Ranshofen, Austria, aluminium works hope to reach an output this year of 16,000 tons, and together with the Lend-Salzburg works should give a total output of 22,500 tonnes. The Belgian output this year is expected to be about 2,000 tonnes. The U.S. Government is re-opening its forging plant at Erie, Pennsylvania, which was operated during the war and has a capacity of 7,500 tons of finished forgings.

Uranium Found in Victoria.—Uranium has been found in the State of Victoria, 150 miles north-east of Melbourne. Uranium deposits have already been proved in South Australia and in the Northern Territory, but this is the first discovery of active uranium ore in Victoria. The find was made using a new electronic instrument which was recently developed in Canada. A Victorian Government geologist, Dr. Bain, says it was hoped to find more uranium deposits with the aid of this instrument, but it was much too early, he added, to say whether large quantities were likely to be found. The Australian Government has offered rewards for prospectors who find payable deposits of radio-active ores and some thousands of pounds have already been paid.

Development of Queensland's Coal Deposits.—The urgent need for the development of the large deposits of easily-worked black coal in central Queensland had been emphasized by the Premier of Victoria, Mr. McDonald. He said that the development of these coal-bearing areas had to be proceeded with if stagnation of Australian industry was to be avoided. He maintained that there was little likelihood of the N.S. Wales coalmines substantially increasing their output. At present, Australian industry depends mostly on New South Wales for its black coal, but production there since the war has not met the rapidly increasing demand. Mr. McDonald said that Queensland itself would not develop the large coal deposits at Blair Athol and at Callide and he urged the assistance of the Federal Government.

Tanganyika Territory Mineral Exports, First Quarter, 1951.—The value of exports from Tanganyika Territory for the first quarter of the year fell to £375,590 compared with £525,901 for the corresponding period of last year, and that despite the general advance in world prices. The decline was chiefly in diamonds which has been explained as due to a dispute between the diamond syndicate and Dr. Williamson. The respective figures for the first quarter of 1951 are as follows—those for that of 1950 being given in brackets:—Diamonds, 1,887¼ carats, (31,825¾); Gold, 17,120.9 f.oz., (14,514); Silver 9,401 f.oz., (5,690); Lead, 859 tons, (nil); Magnesite, 135 tons, (nil); Mica (sheet), 11.50 tons, (11.38); Tin concentrates, 37.48 tons, (31.48); Tungsten concentrates 11 tons, (21½); and Salt, 791½ tons, (1,071¾).

Southern Rhodesia Mineral Output for First Quarter, 1951.—Minerals worth £3,679,248 were mined in Southern Rhodesia in the first quarter of 1951, an increase of more than 10 per cent over the corresponding figure for 1950, and a 40 per cent increase compared with 1949. Although gold output declined from 133,028 oz. in the first quarter of 1949 to 124,250 oz. in the first quarter of 1951, revenue increased, as a result of devaluation, from £1,147,367 to £1,574,125.

Principal base mineral outputs declared in the first quarter of 1951 were: asbestos, 18,249 tons; chrome ore, 107,844 tons; coal, 600,966 tons; beryllium ore, 248 tons; tungsten (conc.), 56 tons; block mica, 24 tons; tin (conc.) 19 tons; limestone, 76,476 tons; iron pyrites, 8,188 tons; magnesite, 3,364 tons; iron ore, 16,833 tons; and copper, 36 tons.

Greek Mineral Production.—The Greek mining industry is recovering from its post-war difficulties and production of most minerals is increasing steadily, says Reuter's Athens correspondent. If chromite production is maintained at the level reached in the first few months of 1951, total output for the current year will be in the region of 40,000 tons—three times the 1950 total. Magnesite production is also expected to be some three times as high as last year at 78,000 tons. Known deposits of magnesite are estimated at 1,100,000 tons and probable deposits at 3,700,000 tons.

Pyrite output in Greece is expected to reach 200,000 tons this year, and bauxite production may rise to over 100,000 tons this year from 77,000 tons in 1950. Output could be trebled and known reserves amount to 10,000,000 tons while probable deposits are estimated at another 50,000,000 tons. Barytes production is expected to total 30,000 tons, against 21,000 in 1950.

Increasing Iron Ore Supply Prospects.—The Hanna Coal & Ore Corp. (a subsidiary of V. A. Hanna Co.) has entered into a contract to deliver to Bethlehem Steel Co. more than 30,000,000 tons of Labrador Quebec Iron Ores over a 25-year period. This is the first major contract announced by the developers of the ore deposits in these regions and is said to be the largest agreement of its kind ever made.

Sweden expects to export a record of 13,300,000 tons of iron ore this year. The Government planned to reach this figure at the end of 1952, but foreign demand has been stronger than was anticipated. Exports last year were 12,950,000 tons and 12,780,000 tons in 1949 or about the same as pre-war. Most of the exports come from the Kiruna Iron Ore Mines Ltd. (Luossavaara-Kiirunavaara), which has set aside 54,250,000 crowns for changing over to underground work at the Kiruna open-cast workings which are becoming exhausted. Installation at Narvik of new weighing, testing and automatic loading equipment is facilitating shipment, with the loading rate now about 2,000 tons an hour. The water has also been deepened to take ships with a cargo capacity of up to 25,000 tons.

South African Mineral Output, 1950

The South African Department of Mines has now issued figures of mineral production and export for the year 1950, but values are not yet available, except for minerals exported, which were valued at £22,643,076, as compared with £15,401,375 in 1949, but there are no aggregate figures of value for South West African Territory exports.

Production of the most important items is as follows, in s.tons:

	1950	1949		1950	1949
Antimony	14,795	7,990	Lead conc.	922	290
Asbestos ...	87,414	70,917	Magnesite 12,987		11,560
Beryllium.....	930	246	Manganese... 871,863		722,211
Bismuth.....	16	12	Mica (sheet)29,942 lb.		2,898 lb.
Chromite	547,106	445,723	Nickel.....	929	625
Coal...	29,181,801	28,104,585	Osmiridium	6,449 oz.	6,031 oz.
Copper.....	37,460	34,519	Platinum		
Corundum...	3,529	2,716	metals	144,217 oz.	87,375 oz.
Gypsum...	128,843	98,216	Tin.....	804	666
Iron ore	1,310,921	1,369,114	Tungsten conc....	96	418
Kaolin.....	9,322	6,358	Vermiculite...	46,763	23,364

There appears to have been a mistake in the output figures for platinum, as given by our South African correspondent in *The Mining Journal* Annual Review Number. The official government figures of output are as above.

There was also important production of certain minerals from the territory of South West Africa, the chief of which were, in s.tons:

	1950	1949		1950	1949
Beryl.....	726	263	Tin conc.....	182	213
Copper.....	12,289	10,872	Tungsten conc....	19	20
Lead.....	84,877	87,885	Vanadium conc.	580	320
Lithium conc....	9,790	1,159	Zinc conc.....	25,604	27,154

THE CONSOLIDATED ZINC CORPORATION

LARGER TRADING PROFIT
FUNDS CONSERVED TO MEET DEVELOPMENT EXPENDITURE

The Annual General Meeting of The Consolidated Zinc Corporation Ltd., was held on June 19 in London.

The following are extracts from the statement by the chairman, **Mr. John R. Govett,** which had been circulated with the report and accounts:

The market conditions are reflected in this year's financial results, in which the profits for the year, before taxation, amount to £4,570,800, compared with £3,453,429 for 1949. The net profit for the year, after providing for taxation (£3,011,419) and deducting the interest of the minority shareholders in subsidiary companies (£129,701), amounts to £1,429,680, compared with £1,227,119 for the previous year, an increase of £202,561. Reserves have increased out of profits for the year by £744,710, of which £200,000 has been set aside by the parent company for general use within the group, and £544,710 has been provided in the accounts of the main subsidiary companies so as to enable them to retain funds required for capital expenditure programmes.

RISING COSTS

I consider the results of the year to be satisfactory and that they are a fair indication both of the expanding nature of our activities and of the efforts of those who are in charge of our operations in this country and in Australia. It is nevertheless necessary to emphasize that these profits were earned during a period of high prices which are now subject to artificial support by emergency conditions which neither you nor I would willingly see prolonged. Costs have inevitably increased, due mainly to reasons outside the control of the company. In Australia, in particular, there has been a substantial advance in the basic wage (as well as in the lead bonus which fluctuates with the price of lead) affecting the costs under most headings of expenditure. Rising costs have also increased the amount of working capital required to finance stocks and constantly serve to reduce the margin of our resources available for the replacement of out-worn plant and machinery at today's inflated prices, and to meet our development programme, an indication of which was given in last year's report.

In view of this need to conserve funds to meet future requirements, I regret that we are unable to recommend an increase of dividend and are proposing to pay the same rate as that paid last year namely 2s. 6d. per share for the year.

In this connection I referred last year to the need of some relief from taxation to enable companies such as ours to make adequate provision for plant replacements. The report of the Millard Tucker Committee, which has been investigating this problem, has been a disappointment on this point and the problem with which industry is faced has been magnified by the measure proposed by the Chancellor of the Exchequer in his recent Budget to suspend from next year the initial allowances on capital expenditure on plant and buildings. Even on a basis where the present level of profits is maintained in the future, this measure, combined with the rise in income tax and the heavier taxation on profits distributed in dividend, must serve to reduce further the amount available for capital requirements.

MARKETS

It is of interest to note that during 1950, as compared with 1949, imports, both in metal and concentrate form, of lead into the U.S.A. increased from 385,000 tons to 521,000 tons, and of zinc from 368,000 tons to 428,000 tons. During the same period imports into the U.K. fell, in the case of lead from 187,000 tons to 172,000 tons, and in zinc from 245,000 tons to 237,000 tons. The inference that may be drawn from these figures is that American fabricators operating independently were able to secure a greatly increased tonnage from outside sources, thereby forestalling the attempted increases in purchases which had become so necessary for industry in the U.K. As this country, unlike the U.S.A., is almost entirely dependent on imported metal and concentrates, the position is relatively more serious.

Though the level of our prices must at all times depend on the fluctuations in the American economy, there are now superimposed on the normal civilian demand the requirements of rearmament. It is not in my power to judge the final effect of this additional influence on the world metal position. With this in mind, together with the financial problems I have briefly outlined above, I am compelled to emphasize the need of preserving, as far as it is possible to do so, adequate resources to meet the emergencies which must be anticipated in the critical time which lies ahead.

We look forward, in common with all industry, to a return to more stable and peaceful conditions and to the recurrence of freer trading facilities between countries. The most optimistic among us, however, will hardly expect a readjustment to take place without the inevitable set-backs to withstand which will impose considerable strain on industry.

The Report was adopted.

NEW BROKEN HILL CONSOLIDATED, LTD.

A YEAR OF STEADY PROGRESS
MR. JOHN R. GOVETT'S STATEMENT

The Fifteenth Annual General Meeting of New Broken Consolidated Ltd. was held in London, on June 19.

The following are extracts from the statement by the Chairman, **Mr. John R. Govett,** which had been circulated with the report and accounts for the year ended December 31, 1950. The net profit for the year 1950, after providing for taxation on the year's profits was £450,541, compared with £384,014 for the previous year. In addition, the Appropriation Account has been credited with a sum of £155,000, being an amount previously provided for taxation in excess of the actual liabilities for the years up to 1949, which have since been determined. After adding the balance of £75,549 brought forward from December 31, 1949, and deducting the amount of £61,633 required for the interim dividend of 6d. per share paid in January last, there is a balance of £619,457. Out of this it has been decided to transfer the sum of £300,000 to General Reserve, an increase of £100,000 over the amount transferred last year.

In considering their recommendation as to the final dividend for the year, your Board are strongly influenced by the substantial sum still required to be spent in order to complete the equipment and development of the mine.

In face of continuously rising costs of all plant, equipment and labour, the Board are of the opinion that cash resources should this year again be conserved to safeguard the completion of the programme initiated in 1945. They are, therefore, unable to propose any increase in dividend over and above that paid for the previous year, namely, 30 per cent.

I realize that this may prove a disappointment to some who may have anticipated a higher final dividend for the year in view of the rise in metal prices, but equally I believe that they will endorse our determination to ensure full achievement of the success of their enterprise.

I have frequently had occasion in the past to stress the importance of an adequate supply of manpower to the successful achievement of our objectives. This problem has been receiving the constant attention of all the mining companies at Broken Hill. I am happy to be able to say that as a result of negotiations successfully concluded with the Workers' Industrial Union of Australia, arrangements have been made which provide a wider field for recruitment and, we hope, will ensure the manpower required for our expansion programmes and which at the same time safeguard the interests of those on whom the success of the industry has depended in the past.

OPERATIONS

Ore production from the company's leases in 1950 totalled 165,668 tons, compared with 175,232 tons in 1949. Under the terms of the sale of ore agreement with the Zinc Corporation we purchased 43,332 tons of ore, and the total ore treated for our account was 209,017 tons. Deliveries of ore under the agreement have now been completed. As a result, while every effort will be made to increase the quantity and grade of our own production, our output in 1951 may fall short of the total tonnage treated on our account in 1950.

My statement at the annual meeting held in June, 1950, and the report on development and diamond drilling results issued in August of last year referred to the highly satisfactory results from crosscuts and drilling on the No. 19 Level (2,760 ft.).

With regard to the general development on No. 19 Level the Service Winze from No. 18 Level (2,600 ft.), at 438 ft. south of our northern boundary, is operating and east and west crosscuts from it are being advanced. This work, together with that of parties working from the Boundary Winze, will ensure the rapid opening up of these rich ore-bodies during 1951 and 1952.

In my statement last year I referred to the possibility of modifying the residential qualification for employment through the Workers' Industrial Union of Australia, on the line of lode at Broken Hill, with a view to increasing the manpower available for development of the field. After lengthy negotiations a modification was finally accepted at a mass meeting of employees held on June 30, 1950. This modification, which came into effect on July 17, 1950, extended the residential area of qualification for membership of the union to a radius of 300 miles from Broken Hill.

From the date on which the new rule came into effect up to the end of March, 1951, 67 men able to qualify under the amendment had been added to our strength, bringing the total at the latter date, including men engaged under the old rule, to 552. This compares with a total at December 31, 1949, of 475.

The year has been one of steady progress towards our objective of developing and equipping our mine as a major and independent producer. Development work carried out to date more than fulfils the earlier expectations on which our 10-year expansion programme was based and I have every confidence in the future of the property.

The Report was adopted.

CITY DEEP LTD.

The Annual Meeting of City Deep, Ltd., was held on May 30 in Johannesburg.

Mr. W. M. Frames, acting chairman, who presided, in the course of his speech said:

Ore milled at 1,962,000 tons had represented an increase of 135,000 tons over the figure for 1949, the improvement being mainly accounted for by an increase of 95,038 in the tonnage which had been drawn from surface dumps. Increased revenue received as a result of the higher price of gold had made possible a reduction in the pay limit and there had been a consequent decrease of 0.298 dwt. to 4.269 dwt. in the average yield per ton milled.

Working profit for the period under review, after placing £878 to abnormal costs reserve, had amounted to £1,455,203. To that figure had been added a net credit of £14,185, being the difference between sundry items detailed in the income and expenditure account, making a total profit of £1,469,388, which together with the unappropriated balance of £467,807 brought forward at the beginning of the year and £12,700 withdrawn from shareholders contingency reserve, had made a total of £1,949,895. From that sum appropriations of £562,635 for taxation, £12,748 for forfeited dividends refunded and £709,391 for two dividends of 3s. 6d. each had been made, leaving an unappropriated balance of £665,121 to be carried forward to the current year's accounts.

At the annual meeting last year, shareholders had been informed that capital expenditure during 1950 might amount to £258,000. Due to delays in delivery of equipment and the consequent slowing up of the programme for sinking and equipping the sub-incline shafts, expenditure had been considerably less than anticipated and had been incurred mainly in respect of the construction of new buildings and of extensions and renovations of existing buildings and to two reduction plants; winding equipment, power supply and cutting of engine chambers for K1, K2, K3 and 3E sub-incline shafts, pumping stations on the 45th and 48th at the 3D and 1E sub-incline shafts and a water column and power cables in the 3D sub-incline shaft between the 37th and 48th levels. Much of the equipment and material which was due for delivery during 1950 would, however, become available during the current year and it was now estimated that capital expenditure to be incurred during 1951 mainly on the equipping of the K sub-incline shafts would be of the order of £650,000. Appropriations from profits, together with funds on hand at the end of 1950, should be sufficient to enable the company to meet that heavy capital expenditure from its own resources without necessity for increasing the issued capital. Shareholders must expect, however, that dividends might be on a somewhat lower scale during the next year or two.

Footage developed during the year totalled 59,720 ft., which had represented an increase of 2,548 ft. over the figure for 1949. 24,785 ft. had been sampled, of which 11,925 ft., equivalent to 48.1 per cent, had been classed as payable with an average value of 15.9 dwt. over a channel width of 24 in. Increased development had been carried out on the lower-grade South and Main Reefs in the upper levels of the mine, and that work which would be continued during the current year would have the effect of further reducing the grade of ore developed. Meanwhile, new sub incline shafts were being advanced below the 8,500 ft. horizon to permit of more extensive development in the lower levels of the western part of the mine.

The available ore reserve had been re-estimated as at December 31, 1950, to be 6,012,000 tons averaging 5.8 dwt. over a stoping width of 42.6 in. That was an increase of 35,000 tons compared with the ore reserve at December 31, 1949, the value being lower by 0.1 dwt. and the stoping width 0.6 in. greater.

The basis of gold-mining taxation had remained unaltered up to December 31, 1950. Since the close of the year, however, the Minister of Finance had announced the introduction of a revised formula for taxation which was applicable as from January 1, 1951. The new taxation was based, as previously, on the ratio of profit to recovery, and if it had been applied to taxable profits for 1950 it would have had the effect of increasing the taxation payable by the company by about 5 per cent. In addition, tax payable in respect of non-mining revenue had been increased from 4s. in the pound to 4s. 6d.

During the first four months of the current year working profit had been £334,625, additional revenue from sales of gold at enhanced prices had amounted to £92,006, making a total working profit of £426,631.

The special business to be transacted at that meeting was in connection with the alteration of certain of the company's articles of association in order to bring them into line with modern practice and Stock Exchange requirements.

The Report and Accounts were adopted and the special resolution passed.

ST. JOHN D'EL REY MINING CO.

The Ordinary General Meeting of the St. John d'el Rey Mining Co., Ltd., was held at Winchester House, Old Broad Street, E.C.2, on June 14.

The Right Hon. Sir Hugh O'Neill, Bart., P.C., M.P. (Chairman), who presided, in the course of his speech said:

I am glad to be able to report continued progress during the year under review. There is a balance on Working Account in Brazil of £370,329 compared with £197,937 in 1949 after an increased charge for Depreciation of £80,610 compared with £45,000. After allowing for London expenses and taxation, the profit for the year amounts to £137,722, compared with £152,941 in 1949. The Board recommend a final dividend of 7½ per cent net on the Ordinary Stock, making, with the interim dividend of 2½ per cent already paid, 10 per cent net for the year, an increase in the total dividend of 2½ per cent.

The tonnage treated during the year amounted to 370,000 tons, the value of the bullion produced amounting to £2,728,090. This compares with a tonnage of 328,900 last year when the bullion produced realized £1,945,211.

Our efforts towards increased production from the mines, as the solution for keeping costs within manageable proportions, have been continued with some success. The figures expressed in kilos of ore produced per man per day for the past three years are interesting; in Morro Velho it was 419 kilos in 1948, 459 in 1949 and 500 in 1950, while at Espirito Santo the figures are even more striking being 571 in 1948, 614 in 1949 and 831 in 1950. Although we believe that tonnage can still be increased, and the comparison for the first five months of 1951 with the first five months of 1950 is satisfactory, there must come a time when the present mainways of both mines will be dealing with the limit of ore which they can efficiently handle. The total of ore crushed from Morro Velho and Espirito Santo for 1950 of 372,000 tons compares very favourably with our record years in 1940 when 387,900 tons were crushed, especially if we take into account that in 1940 an eight hour day was worked and work was continued on an average of three Sundays per month, while in 1950 we were subject to a six hour day and no effective work on Sundays.

The disposal of 80 per cent of our gold in the free market has so far continued without difficulty at the price of Cr.$42.00 per gramme.

The Ore Reserves at the end of 1950 amounted to 8,145,000 tons made up as follows: 5,949,000 in Morro Velho, 1,941,000 in Espirito Santo and 255,000 in Faria and Bicalho. The average indicated grade of these reserves is 12.43 grammes (7.98 dwt.).

With regard to plans for the future, there are two uncertain factors at the present time, namely the price of gold and costs, and the best way to overcome these difficulties is by an increase in production. With this end in view, Mr. Wigle, the Mine Engineer, put forward certain proposals which he considered necessary to increase production to approximately 60,000 tons per month. At the same time, he was insistent that his proposals should be considered by an independent engineer. This course was accordingly adopted and an eminent Mining Engineer was engaged to report on the scheme. While he made certain alternative suggestions, he gave general approval to Mr. Wigle's proposals which have been sanctioned by the Board. The scheme consists in the sinking of a new vertical shaft from the surface to a depth of approximately 3,400 ft., thereby avoiding the two lifts at present in use in the D and E shafts. The new vertical shaft has already been started and is at present down 103 ft. in solid rock.

Such then, in outline, are our plans for the future. They will necessitate considerable new capital expenditure and in round figures our present estimate is that something in the region of £1,500,000 will be required. Of this sum it should be possible to find over £800,000 out of net current assets, while in addition, as mentioned in the Directors' Report, the Board have decided to make a rights issue to Stockholders on the basis of one Ordinary share for every £14 Ordinary Stock held, at a price of 25s. per share. This will involve the issue of approximately 39,000 shares this year, which will bring in just under £50,000, and further issues will probably be made later on up to the total of the authorized capital of the Company. The balance of the sum required should be available out of profits, spread over a period of years. It is unfortunate that the Chancellor of the Exchequer has recently seen fit to abolish the initial allowance of 40 per cent, as this would have been a great help to the Company. The Board are confident that their proposals for expansion are in the best interests of the Company and they hope that Stockholders will approve their decisions.

The Report and Accounts were adopted.

IMPERIAL CHEMICAL INDUSTRIES

TREASURY REJECT BONUS ISSUE

The Twenty-Fourth Annual General Meeting of Imperial Chemical Industries, Ltd. was held on June 14 in London.

Mr. J. Rogers, O.B.E., the Chairman, in the course of his speech said:

For the first time in twenty years our Annual General Meeting is being held without Lord McGowan in the chair. The Board have paid tribute in their Annual Report to the outstanding services which Lord McGowan has rendered to our Company and to British Industry throughout a long and distinguished business career dating back to 1889 when he joined Nobel's Explosives Co., Ltd., in Glasgow. Lord McGowan's resignation at the end of last year from the Board of the Company and from the office of Chairman is a sad loss to the Company and to his colleagues on the Board. I have been associated with him for over fifty years, and I cannot speak too highly of his personal qualities and leadership which have brought him to the front rank of industrial leaders throughout the world.

TRIBUTE TO LORD MCGOWAN

When Lord McGowan succeeded to the Chairmanship on the death of the first Lord Melchett in December, 1930, Industry was in the trough of one of the worst trade depressions in the history of this country, but under Lord McGowan's inspiring leadership and wise guidance the Company emerged safely, and when he laid down the burdens of office it must have been a source of great pride and pleasure to him to reflect that in 1950, after twenty years under his Chairmanship, the Company had achieved the highest turnover and profits in its history.

It is not surprising, after so many years of arduous work and responsibility, that Lord McGowan should seek some respite, but I am pleased to say that he has accepted the Board's offer to become the Company's Honorary President, and it is in that capacity that he is with us on the platform to-day. On your behalf, and on behalf of the Board and of all others who serve the organization, I should like to thank Lord McGowan for all that he has done for this great Company.

RECORD TURNOVER

You will notice that the turnover for 1950 was a record. Consolidated sales at £220,000,000 were more than 20 per cent higher than those in 1949. Although part of the increase is due to increased prices, I am pleased to say that the greater part is attributable to an increase in the physical volume of our business. Exports were 25 per cent more than in 1949, and were running at the rate of about £1,000,000 a week during 1950.

You will also have noticed that the revaluation of assets has resulted in a very big increase in the capital reserves shown in the Balance Sheet. These reserves at December 31, 1950, amounted to £118,000,000 against £17,000,000 a year before. Since we are firmly convinced that realistic figures for assets should be matched by realistic figures for capital, it was the intention of your Directors to capitalize a substantial part of these reserves and to make an issue to stockholders of shares credited as fully paid which would have brought the figures for issued capital more into line with reality. An application was accordingly made to the Capital Issues Committee for the issue of such shares under a comprehensive scheme. We have been notified, however, that His Majesty's Treasury is not prepared to give consent to this comprehensive scheme. No reason was given for the refusal.

PROSPECTS

In the immediate future the Company will share with the rest of British Industry those difficulties which arise from the shortage of essential raw materials. Three of the materials in short supply which affect the Company's manufacturing operations are sulphur, non-ferrous metals and benzene.

Our prospects for 1951 are bright but each year brings its own special problems, and the role of prophet is a dangerous and thankless one. I will not assume it to-day. I can, however, say that the results for the first quarter of 1951 are encouraging. Turnover for that quarter was 20 per cent higher than that in the corresponding quarter of 1950.

We are all in sympathy with any steps taken to prevent the avoidance by taxpayers of burdens placed fairly upon them, but the legal avoidance clauses contained in the Finance Bill go much beyond that. In their present form they appear to cover normal transactions entered into in the ordinary course of business and will seriously hamper the development of the overseas trade of the country. It is to be hoped that the method finally adopted for the prevention of tax evation will not interfere so seriously with legitimate trading transactions.

The Report and Accounts were adopted.

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DECLARATION OF COLLIERY DIVIDENDS

NOTICE IS HEREBY GIVEN that DIVIDENDS have been declared payable to shareholders/stockholders registered in the books of the undermentioned Companies at the close of business on June 30, 1951.

The Dividends are declared in the currency of the Union of South Africa and become due on July 1, 1951. Warrants will be posted from the Head and London Offices on or about August 8, 1951.

The Dividends are payable subject to the usual conditions which can be inspected at the Head and London Offices of the Companies.

The Transfer Books and Register of Members will be closed in each case from July 2 to 7, 1951, both days inclusive.

The effective rate of Non-Resident Shareholders' Tax is 7½ per cent.

Name of Company (Each of which is incorporated in the Union of South Africa)	Dividend No.	Rate of Dividend
Amalgamated Collieries of South Africa Limited ...	30 (Interim)	1s. per £1 share
*South African Coal Estates (Witbank) Limited ...	57 (Final)	† 2s. 3d. per £1 share
Springbok Colliery Limited	8 (Interim)	6d. per 5s. unit of Stock

*The estimated net profit of South African Coal Estates (Witbank) Ltd. for the year ending June 30, 1951, is £330,000 before providing for taxation. This figure is provisional and subject to audit. The profit for the year ended June 30, 1950, was £358,170 before providing for taxation.

† The final dividend of 2s. 3d. together with the interim dividend of 1s. 9d. declared in December, 1950, makes a total of 4s. for the financial year which is the same as for the previous year.

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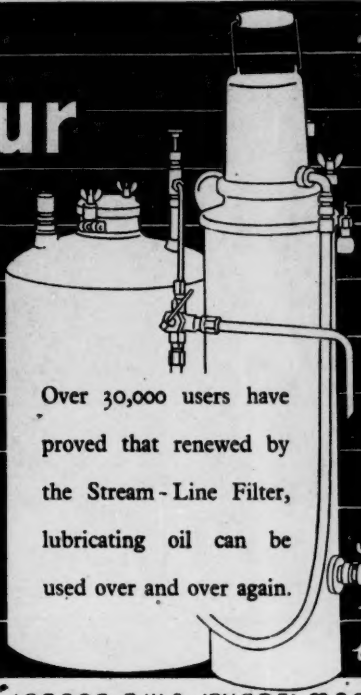

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